EFFECTIVENESS OF MICROTEACHING COMPONENTS

Studies at the Elementary Level

L. C. Singh
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राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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FOREWORD

It is clear from researches on teacher training that, by and large, teachers are good learners. They can master teaching skills and even strategies if appropriate conditions are provided. It is not wholly correct to criticise teachers for lack of motivation. High quality training programmes have been found to produce excellent results. The elements of a quality programme should include the theoretical basis or rationale of the teaching process, the observation of demonstration by persons who are relatively more competent in teaching, the feedback received from them in relatively controlled and protected conditions, and transfer of the teaching competence thus acquired to real classroom teaching. The theory and the practice of microteaching are based on such pedagogical considerations.

There is an urgent need to modernise teacher education programmes. Teacher training need not be seen as a highly structured series of steps. Teachers have varying degrees of preferences to control their own activities. Their cognition and self-concept interact with their training. Therefore, training designers and trainers have to create settings in which training is modulated to the learning styles of the teachers. The energising environment and the state of growth of the teachers exercise enormous influence both on one's satisfaction with training and its likelihood of success.

Microteaching is an innovative technique which used the mastery learning approach for developing teacher competence. Microteaching is based on the premise that the complex teaching act can be analysed into simple teaching skills. The microteaching-based programme of student teaching makes the block teaching programme easier, meaningful and more satisfying. It takes the student teacher from the graded preparatory stages to full-scale real teaching.

The Department of Teacher Education has been working on the developmental aspects of teacher training programmes for quite some time. A considerable amount of experimental work has been done in the area of microteaching. I am confident that the effective training procedure of micro-teaching used in the training-cum-research project undertaken by the Department of Teacher Education, Special Education and Extension Services would become more adaptive and energising. It would provide teachers more active powers of growth, opening avenues that will release the power of individual styles of learning and enable teachers to increase their own personal technology for acquiring fresh ideas and skills.

I appreciate the efforts of Dr. L.C. Singh, Professor of Education in the Department of Teacher Education, Special Education and Extension Services, in planning, designing and coordinating the project. His zeal to improve teaching practices and his insight into teacher behaviours have contributed to the shaping of the present work. I am thankful to Dr. T. Singh, Reader in Education, Banaras Hindu University (BHU), for acting as one of the resource persons in the training workshops and for his help in drafting this report.

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New Delhi
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PREFACE

Education, in its wide connotation, forms the matrix in which the national character finds shape : and it is the teacher who is most active in deciding the structure, value and hue of the educational system. The teacher, in turn, is shaped by the education that he receives during his academic course and his professional career. Till very recently it was not clearly perceived how to educate teachers for the crucial role that they play in the nation building process. But with the effort of professionalising teacher education it is getting clearer. The skills and competencies of teaching have been identified and scientific strategies of training evolved. It now remains to implement and use these skills and strategies. The National Council of Educational Research and Training (NCERT) took up several research and development projects to improve teacher education at both the elementary and the secondary level.

Microteaching as a new strategy of training teachers has been tried out at the secondary level for the last one decade. Primary teacher education is an important sector, as it forms the basis of the structure of education. Hence it was considered necessary to transfer microteaching experience and expertise to the training of elementary teachers. An experimentation to test the relative effectiveness of variations in microteaching components under the training-cum-research project was undertaken in 1983-84. Seventeen primary teacher education institutions participated in the project. It is hoped that the report of the project will prove of use to educational administrators, policy makers and teacher educators in the field to improve training efforts using microteaching and its simple principles in pre-service and in-service training programmes.

We acknowledge with gratitude the encouragement and facilities extended by the Council authorities, particularly Prof. A.K. Jalaluddin and Prof. (Smt.) Snehlata Shukla. The principals and the participating teacher educators deserve our sincere gratitude without whose zeal and cooperation this project could not have been successfully completed. We thank Km. Sushma Srivastava and Shri Srinivas Pandey of the Faculty of Education, BHU, and Shri Prabhakar Singh of the Department of Teacher Education, NCERT, who helped us in the analysis of data and in preparing the manuscript.

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CHAPTER I

MASTER PROJECT REPORT

The quality of education depends on the quality of teacher education. In order to improve the quality of teacher education in India, various committees and commissions have pointed out a number of inadequacies in our present teacher education programme. One of the major inadequacies refers to the practice teaching of student teachers. Among the various aspects of practice teaching, microteaching is very important. Our present day teacher education programme is heavily theory-loaded, which can be made effective with the support of a systematically designed programme of training in teaching skills. The Education Commission (1964-66) has also laid emphasis on the need for qualitative development of teacher education. An experimental try-out of microteaching providing skill-based teacher training is one innovation which has proved to be quite promising.

Most of the studies in microteaching in India indicate that microteaching is an effective technique in the modification of teacher behaviour. Some of these studies point out that it is a better technique of training than the traditional training technique. The individual needs of the pupils are given more importance by the teacher when the microteaching technique is used. Tiwari (1967) and Marker (1973) found that certain teaching skills as reinforcement and silence and non-verbal cues are better developed by the microteaching technique. Joshi (1977) used three skills : (i) Stimulus Variation, (ii) Illustrating with examples, (iii) Silence and Non-verbal cues in her investigation and found that student teachers exposed to microteaching for the skill-based instructional materials scored higher in the acquisition of skills than student teachers exposed to the traditional teaching programme. A similar result was also found by Chudasama (1971), that direct teacher behaviour is better developed by microteaching.

Many studies have been done on the effectiveness of microteaching skills. Passi and Shah (1974) and Abraham (1974) found that microteaching is an effective technique in developing the skill of questioning. The skill of reinforcement, and silence and non-verbal cues have been studied by Passi and Shah (1974) and Joshi (1974), and they found that microteaching is a better way to develop these skills. Singh (1974) has found that microteaching is more effective than the conventional approach to teacher training and interaction analysis in the modification of teacher behaviour. The general teaching competence of student teachers is greatly affected by microteaching rather than by the usual practice teaching (Das, Passi and Singh, 1976). Bhattacharya (1974) also found that microteaching is an effective technique in the development of skills.

Apart from the above studies, the Department of Teacher Education (DTE), NCERT, carried out a series of researches on microteaching for strengthening the student teaching programmes in the colleges of education. The department conducted, in 1975-76, a study on the effectiveness of microteaching vis-a-vis the conventional programme of student teaching for developing teaching competence. This study along with a number of studies conducted in different parts of the country provided positive results in favour of microteaching.

Another national project 'Differential Effectiveness of Microteaching Components' was carried out by the department in collaboration with several Colleges of Education in 1977-78. This was planned for the introduction of microteaching before the regular practice teaching programme started. The validity of this study was found out and was ascertained by the replication of the study in the consecutive year. These two studies provide empirical evidence of the effectiveness of variations in microteaching components on the development of teaching competence among student teachers.

The above three field experiments along with studies on various aspects of microteaching such as skill and integration strategies conducted in Regional Colleges of Education and other University Departments of Education proved helpful in the institutionalisation and stabilisation of the microteaching

procedure as an initial and integral phase of the practice teaching programme in secondary teacher education institutions in the country.

With this positive experience the Department of Teacher Education, NCERT, thought of transferring the microteaching innovations to the elementary level. To start with, regional orientation courses for elementary teacher educators were organised during 1980-82. However, the orientation programmes are now being conducted by the Regional Colleges of Education. The Department is concentrating its efforts on carrying out research, including field experiments, in collaboration with elementary teacher training institutions to establish the effectiveness of microteaching at the elementary level. This would hopefully prompt the adoption of this innovation and its subsequent stabilisation in due course of time. In this context the following study has been planned.

The Problem

THE EFFECT OF MICROTEACHING WITH ITS COMPONENT VARIATIONS ON GENERAL TEACHING COMPETENCE.

Objectives of the Project

The general objectives of the study are :

1. To compare the effects of the microteaching technique with the effects of the conventional method upon the development of general teaching competence (GTC)
2. To study the effects of the microteaching technique with component variations in developing teaching competence.
3. To study the training effects on the attitude towards microteaching.
4. To study various academic and administrative problems of the practising microteaching procedure in participating teacher training institutions.

The following are the specific objectives :

1. To compare the effect of different modelling (perceptual/symbolic) on the measures of general teaching competence of student teachers.

2. To compare the effects of different modelling upon the attitude of student teachers towards microteaching.
3. To compare the effects of varying sources of feedback (supervisor and peer) in improving the general teaching competence.
4. To study the effects of varying sources of feedback upon attitudes of student teachers towards microteaching.
5. To study the effect of microteaching under simulated and real classroom situations in respect of general teaching competence.
6. To study the effects of microteaching under simulated conditions in developing favourable reactions towards teaching.
7. To study the differences in the acquisition of general teaching competence of student teachers due to a change in the set of skills.
8. To find out the differences in the attitude of student teachers towards microteaching due to a change in the set of skills.
9. To compare the retention level of teaching competence in relation to different types of modelling, sources of feedback and conditions, and sets of skills.

Hypotheses

Ho_1 There is no significant difference in the GTC scores of student teachers trained through microteaching and traditional practice teaching.

Ho_2 There are no significant differences in the GTC scores of student teachers trained through microteaching with different modelling, symbolic and perceptual procedures.

Ho_3 There is no significant difference in the GTC scores of student teachers trained through microteaching with different modes of feedback (supervisor and peer).

Ho_4 There is no significant difference in the GTC scores of student teachers trained through microteaching under simulated and real classroom situations.

Ho_5 There is no significant difference in the attitude scores of student teachers towards microteaching when trained through microteaching with different modelling.

Ho_6 There is no significant difference in the GTC scores of student teachers trained through microteaching when the set of skills is changed.

Ho_7 There is no significant change in the attitude scores of student teachers towards microteaching when trained through microteaching with different sources of feedback.

Ho_8 There is no significant change in the attitude scores of student teachers towards microteaching when trained through microteaching under simulated or real classroom conditions.

Ho_9 There is no significant change in the attitude scores of student teachers towards microteaching when the set of skills is changed while training through the microteaching technique.

Method and Procedure

It was a cooperative field project using the experimental method. From all over the country, 17 teacher education institutions at the elementary level, participated in this field experiment.

As a first step, the teacher educators of the cooperating institutions who had already received training in microteaching during orientation courses organised by the DTE/RCE attended the workshop in Delhi in August, 1983. They planned and designed their sub-studies within the framework of the master project.

The project consisted of two important experiments using parallel group designs, I and II respectively. According to the first experiment the control group was trained by the traditional technique and the experimental group by the Standard Microteaching Technique (SMT). In the second experiment the experimental group of the first experiment was treated as the control group, i.e., the group who received SMT in the

first experiment was a control group for the second experiment. Deliberate variations in the components of the microteaching technique were made in the experimental group. This new treatment was called Modified Microteaching Technique (MMT).

Sample

The subjects of the experiments were the student teachers studying in the second year of the two-year teacher training programme during 1983-84. Each institution which participated in the field experiment had 10-15 students in each of the experimental and control groups. In all 17 institutions participated in this project and thus 17 sub-studies had been undertaken. This master project had 336 student teachers.

Treatment

1. *Traditional Training (TT)*

This method of teacher training consists of discussions of the principles of teaching and demonstration lessons. After this the student teachers are required to give lessons in real classes for a period of 35 to 40 minutes.

The student teachers first prepared the lesson plans, discussed them with their supervisors and taught the lessons to a full class for the entire period. The lessons were supervised by their supervisors during the full period or during a part of it. While the student teacher taught,, the presence of a regular teacher was not required. The supervisor wrote his comments. The pupil teacher discussed the taught lesson plan with his supervisor in the school or at the college. Peers also sometimes observed fellow student teachers and held informal discussions with them.

2. *Standard Microteaching Technique (SMT)*

The experimental group I used the treatment of SMT. The following procedures have been adopted by all the collaborating investigators for this treatment.

Step i : Orientation about microteaching

In the beginning of this step a theoretical discussion about the concept of microteaching was conducted. Afterwards the merits and demerits of microteaching were explained.

Step ii : Discussion of teaching skills

Firstly the concept of teaching skill was clarified. The six teaching skills were explained in minute detail with the help of the write-up on the specific teaching skills developed by the resource persons. Before the practice, one skill was discussed at a time. Student teachers were trained in observing corresponding teaching skills.

Step iii : Persentation of model lesson

The model lessons of the corresponding teaching skills were demonstrated by the investigator in all the method subjects chosen by the student teachers. These model lessons were the same as those given in *Core Teaching Skills: Microteaching Approach* (Jangira, 1982).

Step iv : Preparation of microlesson plans

A standard lesson format as given in the above book was used. One unit concept was selected for a microlesson.

Step v : Microteaching setting

The following was the microteaching setting under this standard procedure :

(*a*)	Time	Teach	6 mts.
		Feedback	6 mts.
		Replan	12 mts.
		Reteach	6 mts.
		Refeedback	6 mts.
			36 mts.
(*b*)	Number of pupil teachers		10
(*c*)	Supervisors		1 or 2
(*d*)	Feedback by the peer supervisor		

Step vi : Treatment under simulated conditions

Step vii : Sequence of skills

The six skills are developed in the following order :

Set of Skills

Set One	*Set Two*
(*a*) Questioning	1. Questioning
(*b*) Reinforcement	2. Reinforcement
(*c*) Narration	3. Narration
(*d*) Recitation	4. Dramatisation
(*e*) Stimulus variation	5. Stimulus variation
(*f*) Classroom management	6. Increasing pupil participation

Step viii : Observation of teaching skills

The teaching skill developed through microlessons were observed by the peer/supervisor (frequency as well as rating) given in *Core Teaching Skills*. The rating based on the frequencies were given after the lesson on a rating type schedule.

Step ix : Feedback

Immediate feedback was given to the student teachers individually. The feedback was based on the tallies and the rating on the observation schedules and the interpretation in the light of model lessons.

Step x : Teaching time

Two complete cycles of microlessons for each of the six skills were given by the trainees. The teaching time devoted to 12 microteaching lessons and an equal number of traditional teaching (TT) lessons was the same.

3. *Modified Microteaching Technique* (*MMT*)

The treatment of MMT is exactly the same as SMT except for the planned variation occuring in one of the component aspects of the microteaching technique. The treatment variations are indicated below :

(*i*) Modelling—Symbolic/Perceptual/Audio
(*ii*) Feedback—Supervisor/Peer/Audiotape
(*iii*) Condition—Simulated/Real Classroom/Mixed
(*iv*) Set of skill—Same/Different
(*v*) Teaching Unit—Same/Different in 'Reteach' Session
(*iv*) Cycle—Full/Half

Tools

The following tools were used for the collection of relevant data for the study :

1. Teaching Assessment Battery
2. Evaluation Proforma for Teaching Skills
3. Reaction towards Microteaching
4. Self Evaluation of Microteaching Programmes—a Rating Scale
5. Questionnaire on Problems of Implementation of Microteaching

1. *Teaching Assessment Battery*

The Teaching Assessment Battery consists of 20 items. These items are based on different aspects of teaching. Adjustment to each item and their tpecification have also been given. It is a seven-point scale and teacher educators are asked to rate their teachers on each item. It was administered after the completion of the project.

2. *Evaluation Proforma for Teaching Skills*

For observing the teaching skills two types of evaluation proformas, frequency type and rating type were used. All these proformas were developed by Passi *et al* (1976). Each of these proformas has items related to the various components of the corresponding teaching skills. The frequency type proformas were used during the microlesson whereas the rating type proformas were used at the end of the lessons. In the present study both the types of proformas were used for the purpose of giving feedback only.

3. *Attitude towards Microteaching : a Rating Scale*

This scale was prepared by the Department of Education, Indore University, Indore. It was used to get the reactions and the attitudes of student teachers towards the microteaching programme. The scale contains thirty two statements covering all the dimensions of microteaching. All the statements are to be rated on a five-point scale.

4. *Self Evaluation of Microteaching Programme : a Rating Scale*

This rating scale was prepared by the DAV College of Education, Abohar (Punjab). It is a rating scale for self evaluation and was used to assess the success of the microteaching project. It is a self evaluating scale and the subjects involved in the project were asked to evaluate the programme. This proforma contains twenty two statements covering all aspects of microteaching such as simulation, role playing as a microteacher, peer supervisor, college supervisor and teaching skills practised by student teachers, etc. It is a five-point scale and it was administered on the completion of the project.

5. *Questionnaire on the Problems of Implementation of Microteaching.*

This questionnaire was developed by the DAV College of Education, Abohar (Punjab). It was prepared to investigate the academic and administrative problems and difficulties faced by the investigators during the implementation of the microteaching project in their respective institutions. The problems that were faced and those that are likely to be faced have been categorised as : (*i*) Academic, and (*ii*) Administrative. Each problem area has two parts. The first part is related to the quantitative aspect of the problem to be rated on a three-point scale and the second part is related to the qualitative aspect.

Analysis of the Data

The data of each study was analysed by the investigator. Mean, Standard Deviation, and Standard Error of the raw scores were then computed for SMT, MMT, and TT for all the variables. The 't' test was applied to test the significance of difference in GTC, self-assessment and attitude scores due to various treatments under SMT, MMT and TT.

TABLE I

EXPERIMENTAL DESIGN—I

Phase	*Control Group*	*Experimental Group*	*Time*
(*i*) Pre-testing	Traditional Teaching	SMT	1 Week
	Teaching Competence	Teaching Competence	
(*ii*) Treatment	12 Regular lessons in normal school conditions	12 Microlessons two in each of the six skills Set A/Set B	6 Weeks
(*iii*) Post-testing	Teaching Competence	Teaching Competence	1 Week
		Problems of MT	
		Self-Evaluation of MT	
		Attitude to MT	

TABLE II

EXPERIMENTAL DESIGN—II

Phase	*Control Group (A)*	*Experimental Group (B, C)*	
	SMT (A)	MMT-B	MMT-C
(*i*) Pre-testing	GTC	GTC	
(*ii*) Treatment	Standard Micro-teaching procedure	1. Modelling variation 2. Feedback variation 3. Condition variation 4. Set of skills	1. Modelling variation 2. Feedback variation 3. Condition variation 4. Set of skills
(*iii*) Post-testing	GTC	GTC	GTC
	Problems of MT Self-Evaluation of MT Attitude to MT	Problems of MT Self-Evaluation of MT Attitude to MT	Problems of MT Self-Evalua- of MT Attitude to MT

TABLE III

VARIATIONS IN COMPONENTS AS TREATMENTS

Microteaching Components	*Variations in Components*		
	A	*B*	*C*
1. Modelling	Perceptual	Symbolic	
2. Immediate feedback	Supervisor	Peer	
3. Condition	Simulated	Real	
4. Set of skills	Set A	Set B	

Set A	*Set B*
1. Questioning	1. Questioning
2. Reinforcement	2. Reinforcement
3. Narration	3. Narration
4. Recitation	4. Dramatisation
5. Stimulus Variation	5. Stimulus Variation
6. Classroom Management	6. Increasing Pupil Participation

TABLE IV

TIME SCHEDULE

Phase	*Activity*	*Approximate Duration*
(*i*) Preparation	1.1 Selection of subject 1.2 Formation of groups 1.3 Purpose and plan of the project to be explained 1.4 Cyclostyling of tools	1 Week
(*ii*) Pre-testing	2.1 Observation of two microlesson GTC scale	1 Week
(*iii*) Treatment	3.1 Orientation about MT	1 Week
	3.2 Explaining and demonstrating five teaching skills	2 Weeks
	3.3 Practice of 12 microlessons in each of the six skills, Set A/B	4 Weeks
(*iv*) Post-testing (I)	Observation of two microlessons using GTC scale and other tools	1 Week

Result and Discussion

The results of various analyses are presented in Tables V, VI, VII, VIII, IX, X, XI, XII, and XIII under the six treatment variables (Microteaching/Traditional teaching, Modelling Symbolic/Perceptual, Feedback—Peer/Supervisor, Condition—Simulated/Real, Skills—Set A/Set B and Sex—Boys/Girls). These tables contain the data on the basis of which the objectives of the study have been realised.

Effect of Microteaching

The first objective of the sudy was to compare the effects of the microteaching technique and the conventional method upon the development of teaching competence. For the above objective, the null hypothesis was, "There is no significant difference in the GTC scores of student teachers trained through microteaching and those trained through traditional practice teaching".

The effects of microteaching and of the conventional method of teaching over the general teaching competence were studied. Table V (t-values 5-81) indicates that microteaching

and traditional teaching differ significantly (at 0.01 level) in the development of general teaching competence. Thus it can be concluded that microteaching does make a substantial difference in the development of general teaching competence among the student teachers. In this reference the null hypothesis is rejected at 0.01 level.

TABLE V

EFFECT OF MICROTEACHING ON GTC

Variable		*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
						t-Value	*DF*
GTC	TT	65	22.46	22.41	2.78	−5.81*	128
	MT	65	43.68	19.10	2.37		

* Significant at 0.01 level

TABLE VI

DIFFERENTIAL EFFECT OF MODELLING ON GTC

Variable		*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
						t-Value	*DF*
GTC	Symbolic	43	26.03	17.32	2.64	1.49	80
	Perceptual	39	20.96	12.96	2.07		

Modelling (Symbolic/Perceptual)

To facilitate the analysis of the study each treatment variable is categorised *separately*. For each treatment variable a *separate* objective and hypothesis have been formulated. The first specific objective of the study is, "To compare the effectiveness of different modelling (Perceptual/Symbolic) against the measure of general teaching competence of student teachers." To realise the above objective the hypothesis formed was, "There is no significant difference in the GTC scores of student teachers trained through microteaching with different modelling (Symbolic/Perceptual) procedures."

From Table VI it is found that the t-value (1.49) for the development of general teaching competence, when

different modelling procedures are used, is not significant, in other words, it can be said that there is no significant difference in the retention level of general teaching competence when different modelling procedures are used or the null hypothesis is accepted.

Regarding the use of different modelling procedures the other objective of the study is, "To compare the effect of different modelling upon the attitude of student teachers towards microteaching". The respective hypothesis of the objective is, "There is no significant difference in the attitude scores of student teachers towards teaching when trained through microteaching with different modelling."

Table VII reveals that there is no significant change in the attitude scores of student teachers when trained through microteaching with different modelling. It can also be said that symbolic and perceptual modelling does not produce a different effect on the attitude of student teachers towards microteaching. Since the t-value is 0-09 which is not significant, the null hypothesis is accepted.

TABLE VII

DIFFERENTIAL EFFECT OF MODELLING ON ATTITUDE

Variable		*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
						t-Value	*DF*
ATTITUDE	Symbolic	43	74.74	6.66	1.01	0.09	80
	Perceptual	39	74.61	6.52	1.04		

Effect of Feedback (Peer/Supervisor)

Objective : To compare the effects of varying sources of feedback (supervisor/peer) in improving general teaching competence.

Hypothesis : There is no significant difference in the GTC scores of student teachers trained through microteaching with different modes of feedback (supervisor and peer).

To test the above hypothesis, the significance of difference between means was calculated. The t-value (2.00) indicates that there is a significant difference (at 0.05 level) in peer and supervisor feedback in the development of general teaching competence. Thus the null hypothesis is rejected. Table VIII shows that peer feedback is more effective in developing the general teaching competence of student teachers than the supervisor feedback.

TABLE VIII
DIFFERENTIAL EFFECT OF FEEDBACK ON GTC

Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
G Peer	29	26.34	13.52	2.51		
T					2.00*	56
C Supervisor	29	19.82	11.16	2.07		

* Significant at 0.05 level

Objective : To study the effect of varying sources of feedback upon the attitude of student teachers towards teaching.

Hypothesis : There is no significant change in the attitude scores of student teachers towards teaching when trained through microteaching with different sources of feedback.

Table IX (t-value 0.83) shows that the null hypothesis is accepted as there is no significant change in the attitude scores of student teachers towards teaching when trained through microteaching with different sources of feedback, i.e., there is no change in the effect of peer and supervisor feedback on the attitude of student teachers towards teaching or both, peer and supervisor feedback are equally effective in the development of the attitude of student teachers towards teaching.

TABLE IX

DIFFERENTIAL EFFECT OF FEEDBACK ON ATTITUDE

Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
ATTITUDE						
Peer	28	69.92	8.50	1.60	−0.83	54
Supervisor	28	71.82	8.48	1.60		

Effect of Condition (Simulated/Real)

Objective : To study the effectiveness of microteaching under simulated and real classroom conditions in respect of general teaching competence.

Hypothesis : There is no significant difference in the GTC scores of student teachers trained through microteaching under simulated or real classroom conditions.

Table X indicates that the t-value 2.09 is significant at 0.05 level which means that the simulated condition of the classroom is more effective in the acquisition of general teaching competence. Thus the null hypothesis framed above is rejected at 0.05 level.

TABLE X

DIFFERENTIAL EFFECT OF CONDITION ON GTC

Variable	*Number of Cases*	*Mean*	*Standard Daviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
GTC Simulated	39	32.08	15.27	2.44	2.09*	76
Real	39	24.91	15.03	2.40		

*Significant at 0.05 level

Effect of Skills—(Set A/Set B)

Objectives : To study the differences in the acquisition of general teaching competence of student teachers due to change in the set of skills.

TABLE XI

DIFFERENTIAL EFFECT OF SKILLS ON GTC

Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
G Set A	50	11.81	15.80	2.23		
T					—2.32*	98
C Set B	50	18.82	14.31	2.02		

*Significant at 0.05 level

Hypothesis : There is no significant difference in the GTC scores of student teachers trained through microteaching when the set of skills is changed.

Table XI shows t-value as 2—32 which is significant at 0.05 level. There is a significant difference is Set A and Set B in the development of general teaching competence. Set B of skills is found more effective than Set A.

TABLE XII

DIFFERENTIAL EFFECT OF SKILLS ON ATTITUDE

Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
A						
T						
T Set A	50	74.98	9.40	1.33		
I						
T					0.51	98
U Set B	50	74.10	7.88	1.11		
D						
E						

Objective : To find out the difference in the attitude scores of student teachers towards teaching due to change in set of skills.

Hypothesis : There is no significant change in the attitude scores of student teachers towards teaching when the set of skills is changed while training through the microteaching technique.

Table XII (t-Value 0.51) indicates that there is no change in the attitude of student teachers towards microteaching

when the set of skills is changed. From this it can be concluded that the attitude of student teachers is not affected by the change in the set of skills, thus the null hypothesis is accepted.

Along with the above study the difference found in the attitude of male student teachers and female student teachers towards microteaching was also studied. It was found that sex did not affect the attitude of student teachers. Both boys and girls had the same attitude towards microteaching. The data is presented in Table XIII.

TABLE XIII

DIFFERENTIAL EFFECT OF SEX ON ATTITUDE

Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
					t-Value	*DF*
ATTITUDE						
Boys	225	75.96	9.47	0.63		
					—0.89	328
Girls	105	76.94	9.06	0.88		

All the student teachers of different treatment levels were asked to assess themselves and their scores were categorised and analysed. The mean value of each group was calculated and standard deviation found out for each of the two groups on each variable (Table XIV).

TABLE XIV

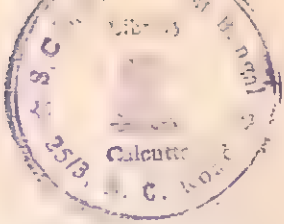
EFFECT OF DIFFERENT VARIABLES ON SELF ASSESSMENT

	Variable	*Number of Cases*	*Mean*	*Standard Deviation*	*Standard Error*	*Pooled Variance Estimate*	
						t-Value	*DF*
SELF ESTEEM	Symbolic Modelling	29	81.96	10.72	1.99	0.54	66
	Perceptual	39	80.46	11.70	1.87		
	Peer	29	75.65	6.75	1.25	0.31	53
ASSESS	Feedback Supervisor	26	75.11	6.22	1.22		
	Set A	50	77.30	11.43	1.61	0.35	98
SSM	Skills Set B	50	76.40	13.24	1.87		
	Boys	210	79.80	10.57	0.73	2.65	313
ENT	Sex Girls	105	76.40	10.95	1.06		

Conclusion

From the above results the following conclusions can be drawn :

1. There is a significant difference in the general teaching competence of student teachers trained through microteaching and those trained through the traditional teaching technique. It is found that the general teaching competence of student teachers is increased by microteaching.
2. The general teaching competence of student teachers does not differ significantly when trained through microteaching with different modelling (Symbolic and Perceptual) procedures.
3. Feedback by the supervisor and peer does affect the GTC of student teachers trained through microteaching. It can also be said that the feedback of the peer is more effective than that of the college supervisor.
4. The simulated condition is more effective than the real condition in developing the general teaching competence of the student teachers.
5. The change in the nature of the component skills in a set has differential effects on the general teaching competence of student teachers when trained through microteaching.
6. Symbolic and perceptual modelling do not affect the attitude of student teachers towards microteaching when trained through microteaching.
7. The peer and college supervisor feedback has a similar effect on the attitude of student teachers towards microteaching.
8. The attitude of student teachers towards microteaching is not affected by the change in the set of skills.
9. The attitude of student teachers towards microteaching is not affected by their sex.



CHAPTER II

MICROTEACHING VS. TRADITIONAL TEACHING

Institution Code No.	*Participating Institutions*	*Investigators*
01	P.T.E. College P.O. Bangara (Via) Jalalpur Bazar Dist. Saran (Bihar)	Pramod Ranjan Sinha
02	Shiksha Charcha P.O. Sriniketan Dist. Birbhum (West Bengal)	Nilmoni Kundu
03	Basic Training Centre P.O. Udarband Dist. Cochar (Assam)	i. K.N. Nath ii. B.C. Sinha
04	Lokbhasti Sanosra (Gujarat)	Narendradev Pathak
05	Govt. S.T.C. School Nanta Palace, Kota (Rajasthan)	i. Chandrashekhar ii. N.R. Bhagwani
13	Deptt. of State Educational Research and Training Bangalore (Karnataka)	K. Satyanarayan Singh
15	National School Silchar Dist. Cochar (Assam)	i. Saadllah Chaudhury ii. Birendra Kumar Sinha

Title

A Comparative Study of the Effectiveness of Microteaching and Traditional Teaching on the Development of the General Teaching Competence of Student Teachers in Elementary Teacher Training Institutes.

Background

Most of the studies in microteaching in India indicate that microteaching is an effective technique in the modification of teacher behaviour. These studies also show that this is a better technique of training than the traditional training technique. The microteaching technique provides the student teacher with more individual needs in respect of learning teaching skills. Tiwari (1967) and Marker (1973) found certain skills such as reinforcement and silence and non-verbal cues better developed under the microteaching technique. Chaudasama (1971) also found teacher behaviour better developed by microteaching.

Many studies have been conducted on the effectiveness of microteaching skills. Passi and Shah (1974), and Abraham (1974) found that microteaching is an effective technique in developing the skills of questioning. The skill of reinforcement, and silence and non-verbal cues were studied by Passi and Shah (1974) and Joshi (1974) and they observed that microteaching is a better way to develop these skills. Singh (1974) found microteaching more effective than the conventional approach to teacher training, and interaction analysis in the modification of teacher behaviour. The general teaching competence of the student teacher is highly affected by microteaching when compared to the conventional practice teaching (Das, Passi and Singh, 1976).

The Department of Teacher Education, NCERT, carried out several studies (1975-76) on the effectiveness of microteaching vis-a-vis the conventional programme of student teaching for developing teaching competence. This study along with a number of studies conducted in different parts of the country provided positive results in favour of microteaching. Another National Project—'Differential Effectiveness of Microteaching Components' was carried out by the department in collaboration with several colleges of education in 1977-78. Keeping in view the effectiveness of the microteaching technique on developing the general teaching competence of B.Ed. student teachers, the present project has been taken up at the elementary teacher education level.

The specific objectives are as follows.

1. To test the effectiveness of microteaching in comparison with traditonal teaching on the general teaching competence of the student teacher.
2. To study the effect of microteaching on the attitude of the student teacher towards microteaching.

With these general objectives in view, research projects were designed and undertaken by six of the participating institutions. The detailed project reports written by the respective investigators are given below.

PROJECT SUMMARY-01

Project Title

A STUDY OF THE EFFECTIVENESS OF THE MICROTEACHING TECHNIQUE IN THE TRAINING OF TEACHERS IN PRIMVRY TEACHER EDUCATION COLLEGES.

Specific Objectives

1. To compare the effectiveness of the microteaching technique with the traditional methods of practice teaching in the development of general teaching competence.
2. To study the effect of the microteaching technique on pupil teachers' attitude towards microteaching.
3. To study self evaluation of microteaching by student teachers towards microteaching techniques after the completion of the experiment.

Hypothesis

1. There is no significant difference between the scores of the pupil teachers taught through SMT (Standard Microteaching Technique) and the scores of the pupil teachers taught under TT (Traditional Technique) of teachers' training.

Procedure

The experimental method of parallel group design was used. There were two groups : control and experimental. Both, the control and the experimental group consisted of 15 pupil teachers each. The control group used the traditional technique and the experimental group used the microteaching technique. The following tools were used :

1. Teaching Assessment Scale (Form 0) for use by teacher educators.
2. Questionnaire regarding the problem of the implementation of the microteaching programme for teacher educators.
3. Self evaluation of the microteaching programme—a rating scale for use by student teachers.
4. Attitude towards microteaching—a rating scale for use by student teachers.

Results

Findings reveal that there is a significant difference between the two treatments, *i.e.*, traditional technique and microteaching technique as 'u' value (34.5) is significant at .01 level. Results also reveal that all the pupil teachers under experimental condition responded "extremely favourably" in their attitude towards MT.

Most (93.33%) of the pupil teachers reported that the format of the microlesson plan was very satisfactory. Some (86.66%) reported that the length of each MT session to some extent, was satisfactory.

Many (93.33%) did not find microteaching more difficult than regular practice teaching.

Some (73.33%) found that the practice of the skill of questioning had helped them very much in contributing good questions and delivering them properly in the class.

PROJECT SUMMARY-02

Project Title

A STUDY OF THE EFFECTIVENESS OF MICROTEACHING TECHNIQUES IN THE TRAINING OF TEACHERS IN ELEMENTARY TEACHER TRAINING INSTITUTES.

Specific Objectives

1. To compare the effectiveness of the microteaching technique with the traditioal methods of training technique for the development of general teaching competence.
2. To study the change in attitude towards microteaching due to training through the microteaching technique.
3. To make self evaluation of microteaching by student teachers towards microteaching techniques after the completion of the experiment.

Hypothesis

1. The following null hypothesis has been formulated. There is no significant difference between the GTC scores of pupil teachers taught through standard microteaching techniques and the pupil teachers trained under traditional training techniques.

Procedure

Pre- and post-test parallel group design was used. Control and experimental groups each consisted of eight pupil teachers. Control and experimental groups used traditional and microteaching techniques respectively.

In all, 16 pupil teachers were selected for the experiment. The following tools were used :

1. *Tool*$_1$ for teacher educator : Teaching assessment-scale (F.O.)
2. *Tool*$_2$ for teacher educator : Questionnaire regarding the problems of implementation of the microteaching programme.
3. *Tool*$_3$ for pupil teachers' self evaluation of microteaching programmes—a rating scale.

4. $Tool_4$ for pupil teachers—attitude towards microteaching—a rating scale.

Results

Results show that the difference in the GTC scores of the two groups is significant. The pupil teachers of the experimental group have a higher GTC mean. Pupil teachers who underwent MT treatment have developed a favourable attitude towards the MT programme. Seventy five per cent of the pupil teachers reported that the practice in the skill of narration improved their classroom communication very much. Fifty per cent reported that the objectives of practising the skills had been 'much' achieved and 50%, to a 'large extent'. Many (87.5%) found teacher education to be very helpful and effective in providing feedback.

PROJECT SUMMARY-03

Project Title

A COMPARATIVE STUDY OF THE EFFECTIVENESS OF THE MICROTEACHING TECHNIQUE AND THE TRADITIONAL TECHNIQUE OF TRAINING TEACHERS IN THE TEACHER TRAINING INSTITUTES AT THE ELEMENTARY LEVEL.

Specific Objectives

1. To compare the effectiveness of MT with that of TT in the development of GTC.
2. To find out the problems in the implementation of the microteaching programme.
3. To find out the attitude of student teachers towards microteaching.
4. To study the self evaluation by student teachers at the end of the microteaching experiment.

Hypothesis

1. There is no significant difference in the GTC scores of pupil teachers trained under the standard microteaching procedure and of the pupil teachers trained under the traditional method of teacher training.

Procedure

The experimental method of parallel group design was used. There were two groups : control and experimental. Each group consisted of 15 pupil teachers. The control group used the traditional technique and the experimental group used the microteaching technique. The following tools were used :

1. Teachers' Assessment Scale—used by the teacher educator to assess the general teaching competence of pupil teachers while practising teaching for both the groups.
2. Self evaluation of microteaching programme—a rating scale used by the pupil teachers of the experimental group.
3. Attitude towards microteaching—a rating scale used by the teachers of the experimental group.
4. A questionnaire for teacher-educators regarding academic and administrative problems of implementation of the microteaching programme.

Results

Findings indicate that the GTC scores of student teachers trained through MT are significantly higher then those of student teachers trained through TT. As the mean obtained from the scores of attitudes of the pupil teachers is 85, their attitude towards MT is 'extremely favourable'.

PROJECT SUMMARY-04

Project Title

A STUDY OF THE RELATIVE EFFECTIVENESS OF MICRO-TEACHING IN THE TRAINING OF TEACHERS IN ELEMENTARY TEACHER TRAINING INSTITUTIONS.

Objectives

1. To compare the effect of the microteaching technique with the traditional method of training teachers for the development of GTC.
2. To study the change in attitude towards microteaching due to training through the microteaching technique.

3. To make self evaluation of microteaching by student teachers towards microteaching techniques after the completion of the experiment.

Hypothesis

1. The following null hypothesis has been formulated : The GTC score of the student teachers taught through standard microteaching will be equal to the general teaching competence scores of the student teachers taught under traditional method.

Procedure

The parallel group design method was used. There were two groups—control and experimental—each consisting of 15 pupil teachers. The control group used the traditional technique while the experimental group used the microteaching technique. The following tools were used in the experiment :

1. Teaching assessment scale (Form O) for use by teacher educators.
2. Self evaluation of the microteaching programme. A rating scale for use by student teachers.
3. Questionnaire for teacher educators regarding the problems in the implementation of the microteaching programme.
4. The attitude towards microteaching—a rating scale for the use of student teachers.

Results

Analysis of the data reveals that there is a difference in the GTC scores of the control and experimental groups. Because the lower value of U is O which is significant at .01 level, the null hypothesis is accepted. The experimental group has a favourable attitude towards the microteaching programme.

Sixty per cent of the cases found that the feedback sessions are very helpful in developing the skills. Only 6% felt that the organisation of the programme lacked proper planning. Twenty six per cent of the pupil teachers thought that

the models (perceptual/symbolic/audio) presented on each skill were very effective for developing the teaching skills.

PROJECT SUMMARY-05

Project Title

A COMPARATIVE STUDY OF THE EFFECTIVENESS OF MICRO-TEACHING AND TRADITIONAL TEACHING ON THE DEVELOPMENT OF THE GENERAL TEACHING COMPETENCE OF STUDENT TEACHERS IN ELEMENTARY TEACHER TRAINING INSTITUTIONS.

Specific Objectives

1. To test the effectiveness of microteaching in comparison to traditional teaching.
2. To study the attitude of pupil teachers towards microteaching.
3. To study the self-evaluation of pupil teachers towards microteaching.
4. To find out the problems of implementation of microteaching programmes.

Hypothesis

1. There is no significant difference in traditional teaching and microteaching with regard to the development of the general teaching competence of student teachers.

Procedure

Two groups of pupil teachers were formed—control and experimental—each group consisting of 12 pupil teachers. The traditional technique was employed on the control group and the microteaching technique on the experimental group. The following tools were used :

1. Teaching Assessment Scale (Form O) for teacher educators' use.
2. Questionnaire regarding the problem of implementation of the microteaching programme for teacher educators.
3. Self-evaluation of the microteaching programme—a rating scale for use by student teachers.

4. Attitude towards microteaching—a rating scale for use by student teachers.

Results

Findings show that the difference between the gain scores of the control group and the experimental group is statistically significant at .05 level. The gain score of the experimental group is much higher than that of the control group which shows that microteaching is more effective than the usual traditional teaching.

The mean attitude score of the experimental group is 89.75. This shows that the attitude of the group is extremely favourable towards microteaching programmes.

Seventy five per cent of the cases found the models (perceptual/symbolic/audio) presented on each skill to a large extent effective for developing the teaching skills.

Fifty eight per cent found simulated teaching helpful in practising the skills.

Sixty six per cent of the pupil teachers thought the practice of the skill of questioning had helped them very much in consistently asking good questions and delivering them properly in the classroom.

PROJECT SUMMARY-13

Project Title

A STUDY OF THE EFFECT OF TRAINING USING MICRO-TEACHING WITH ITS COMPONENT VARIATION ON THE TEACHING COMPETENCE OF TUDENT TEACHERS IN THE SECOND YEAR OF THE ELEMENTARY TEACHER TRAINING COURSE.

Specific Objectives

1. To compare the effects of the microteaching technique with the traditional method upon the development of teaching competence.
2. To study the effects of the microteaching technique with the component variation in developing teacher competence.

3. To study the effectiveness of microteaching under *simulated* and *real* classroom situations in respect of general teaching competence.
4. To study the training effects on the attitude of the pupil teacher towards microteaching,
5. To study the various academic/administrative problems in introducing microteaching procedure in the teacher training institutions.

Hypothesis

1. There is no significant difference in the general teaching competence scores of student teachers trained under the microteaching technique under simulated or real classroom condition and those trained under the traditional method.
2. The microteaching training is effective in developing a favourable attitude in student teachers towards microteaching.

Procedure

This study is an experimental design where one control group which was not exposed to the treatment was taken as a reference group while the other groups were exposed to the microteaching training technique. The experimental group I was asked to practice under simulated classroom conditions and the experimental group II was asked to practice under real classroom conditions. Twenty four students were divided into two groups, *i.e.*, 12 in each group. The following tools were used :

1. General teaching competency—a rating scale for teacher educators.
2. Evaluation proforma for rating teaching skills.
3. Reaction towards microteaching for student teachers.
4. Self evaluation microteaching programme (for student teachers)—a rating scale.

Results

As the 'U' value is less than the calculated value the hypothesis is rejected. This means that there is no significant

difference in the GTC scores of student teachers trained through microteaching under simulated conditions and those trained under real classroom conditions.

All the subjects of the experimental group I developed a favourable attitude towards the microteaching training technique. In the case of the experimental group II, 20% of the students developed an extremely favourable attitude while 80% of the students developed a favourable attitude towards the microteaching training technique. After getting the training, 48% of the pupil teachers felt that the format of the microteaching plan was satisfactory to some extent, 57.4% felt that the objectives of practising the skills was achieved to a large extent, 7.2% felt that they could be able to manage the class more efficiently to a large extent.

Forty two per cent did not feel that microteaching was more difficult than regular practice teaching.

PROJECT SUMMARY-15

Project Title

A STUDY OF THE EFFECTIVENESS OF VARIOUS COMPONENTS OF MICROTEACHING IN THE DEVELOPMENT OF THE GENERAL TEACHING COMPETENCE OF STUDENT TEACHERS AT THE ELEMENTARY LEVEL.

Specific Objectives

1. To compare the effect of training in two sets (A+B) of teaching skills using microteaching, on the general teaching competence of student teachers.
2. To compare the effect of training in two sets (A+B) of teaching skills on student teachers' attitude towards microteaching.

Hypothesis

1. At the end of the experiment there is no significant difference in the general teaching competence score of the student teachers trained through microteaching when the sets of skills are varied.

2. At the end of the experiment there is no significant difference in the attitude scores of the student teachers trained through microteaching when the sets of skills are varied.

Procedure

An experimental method of parallel group design was used. Two groups—experimental and control—were used. Both consisted of 13 students each. Out of the 26 student teachers there were six female and 20 male. The following tools were used:

1. Teaching assessment scale for use by teacher educators.
2. Questionnaire regarding the problems of implementation of the microteaching programme for teacher educators.
3. Self evaluation of the microteaching programme—a rating scale for pupil teachers.
4. Attitude towards microteaching—a rating scale for use by pupil teachers.

Results

As the lower 'U' value (30.50) is significant at 0.01 level the difference in the general teaching competence scores of experimental groups I and II are real and not due to chance.

The attitude scores of the experimental group II are higher than the attitude scores of the experimental group I. Hence, with the change of set of skills, the attitued towards microteaching changes. Experimental group I is extremely favourable, while group II is favourable, towards microteaching.

CHAPTER III

PERCEPTUAL AND SYMBOLIC MODELLING

Institution Code No.	*Participating Institutions*	*Investigators*
06	Sevasadan Jr. College of Education, Pune (Maharashtra)	S.N. Parchure
07	Govt. Basic Training School, Attingal, Trivandrum (Kerala)	i. I.A. Janardan Nair ii. K. Gopinathan
08	A.E.S. Jr. College of Education, Ahmednagar (Maharashtra)	S.K. Kala

Title

The Effect of Perceptual and Symbolic Modelling in Microteaching Upon the General Teaching Competence and Attitude of Student Teachers Towards Microteaching.

Background

Modelling is "an individual demonstrating particular behaviour patterns which the observers learn through imitation" (Allen and Ryan, 1969). New responses may either be learnt, or characteristics of the existing responses may be changed as a function of observing the behaviour of others. Lloyd Morgan (1896), Trade (1903), McDougall (1908) considered imitativeness as innate or constitutional forces. Millan and Dollard (1941) fully integrated the concept of imitation into a behaviour theory framework.

The main objective of modelling for teachers is to make them capable of exercising greater control over their own behaviour in classroom situations. Thus it becomes essential for the teacher to be clear about what is to be observed and

what is the purpose of his observation when a complex teaching act is analysed into component parts.

In reference to the question regarding how the model should be presented to teachers, Brog, Kelley, Langer and Gall (1970) observed that a film or a handbook model would best serve the objectives of building an easily disseminated, reasonably priced product. The most economical model would be a handbook dealing with the presentation of a teaching skill indicating teacher pupil verbal interaction. This type of presentation is called symbolic modelling because the responses to be acquired are described in symbols, *i.e.*, words. Perceptual modelling is a display of the actual performance by a teacher demonstrating a skill. A film or a videotape mode in modelling is known as perceptual modelling, while symbolic modelling means telling the trainees by means of written or verbal instructions the behaviours which are desired of them.

Bandura, Ross and Ress (1963) found filmed models as effective as live models. Orme (1966) studied whether teaching behaviour could be acquired in a similar way and whether there were differences in effectiveness between symbolic and perceptual modelling. The videotape led to significantly greater gains than symbolic modelling. Young (1969), Claus (1969), McDonald and Allen (1967) and Koran, *et al.* (1969) produced evidences of student learning in the use of models and all rare issues that relate not to the efficacy of modelling but to questions concerned with the best type of model for different types of skill training. Claus (1969) studied the higher order questioning behaviour of teachers and reported that modelling with supervisory comments is very effective.

For the actual presentation of the model some important questions such as the following need to be answered :

1. How should the model be presented to teachers ?
2. Should there be a repetition of the perceptual model ?
3. How should symbolic modelling be presented to the trainees ?
4. Should they be asked to study the literature at home and discuss it before applying the skill, or should they not discuss it at all ?

5. How much time and how many periods should be given to the trainees in symbolic modelling ?

In the following projects an attempt has been made to compare the effectiveness of modelling, *i.e.*, perceptual and symbolic, in microteaching upon the general teaching competence and the attitude towards microteaching of student teachers.

General Objectives

1. To compare the effectiveness of perceptual and symbolic modelling upon the general teaching competence of student teachers.
2. To compare the effectiveness of perceptual and symbolic modelling upon the attitude of student teachers towards microteaching.
3. To study the reaction of the student teacher towards the microteaching procedure through self-evaluation.

Keeping the aforesaid general objectives in view, research projects were planned and designed by three of the participating institutions. The projects where then carried out during the 1982-83 session. The detailed project reports prepared by the respective investigators are as follows.

PROJECT SUMMARY-06

Project Title

A STUDY OF THE RELATIVE EFFECTIVENESS OF VARIATIONS IN THE MODELLING OF THE MICROTEACHING TECHNIQUE IN THE DEVELOPMENT OF GENERAL TEACHING COMPETENCE IN PUPIL TEACHERS OF ELEMENTARY TEACHER EDUCATION INSTITUTIONS.

Specific Objectives

1. To compare the effectiveness of perceptual and symbolic modelling upon the general teaching competence of pupil teachers.
2. To compare the effectiveness of perceptual and symbolic modelling upon the attitude of pupil teachers towards microteaching.
3. To study the difficulties in the implementation of the microteaching technique at the primary level.

Hypothesis

1. There is no significant difference in the general teaching competence scores of pupil teachers trained through perceptual modelling and those trained through symbolic modelling.
2. There exists no significant difference in the attitude scores of pupil teachers trained through perceptual modelling and those trained through symbolic modelling.

Procedure

The experimental method of parallel group design was used. There were two groups—reference and experimental. Both consisted of 14 pupil teachers each.

The reference group was oriented by teacher educators while the experimental group was supplied with printed instructional material. The following tools were prepared and used in the experiment :

1. Teaching Assessment Scale for use by teacher educators.
2. Questionnaire regarding problems in the implementation of the microteaching programme for teacher education.
3. Self evaluation of microteaching programme—a rating scale for pupil teachers.
4. Attitudes towards microteaching—a rating scale for use by pupil teachers.

Results

Analysis of the data shows that there is no significant difference between the two treatments as 'U' value is 123 which is not significant at .05 level.

There are 12 students in every group (reference and experimental group) who have shown a favourable attitude towards microteaching.

There are two students in each group who have shown an extremely favourable attitude towards microteaching.

More than 50% of the students reported that to a large extent the content of the microlesson was suitable to practice the skill. More than 50% of the students reported that the feedback was very much clear and pinpointed to make them aware of their strong and weak points.

More than 50% of the students reported that the practice in the skill of narration helped to greatly improve their classroom communication.

PROJECT SUMMARY-07

Project Title

A STUDY OF THE EFFECTIVENESS OF VARIATION IN THE MODELLING OF THE MICROTEACHING TECHNIQUE IN THE DEVELOPMENT OF GENERAL TEACHNING COMPETENCE IN TEACHER TRAINEES AT THE ELEMENTARY LEVEL.

Specific Objectives

1. To study the differential effectiveness of modelling (symbolic vs. perceptual) on the general teaching competence of teacher trainees at the elementary level who are oriented in the microteaching technique.
2. To study the attitude of teacher trainees towards microteaching.
3. To study the reaction of the teacher trainees towards the microteaching procedure through self-evaluation.
4. To study the problems faced by the teacher educator in the implementation of the microteaching technique.

Hypothesis

There will be no significant difference in the gain scores of the teacher trainees on their general teaching competence as a result of receiving training through SMT using either perceptual modelling or symbolic modelling (auto-instructional printed material).

Procedure

The experimental method of parallel group was used. There were two groups—reference and experimental groups. Both consisted of 12 students each. The reference group

was oriented by a teacher educator who also gave the live model himself while the experimental group was supplied with printed instructional material including model lessons. Two groups were matched in age, sex, educational qualifications and experience. The following four tools were prepared :

1. Teaching Assessment Scale for use by teacher educators.
2. Questionnaire regarding the problems of implementation of the microteaching programme for teacher education.
3. Self evaluation of the microteaching programme for teacher-education.
4. Attitudes towards microteaching—a rating scale for use by pupil teachers.

Results

As the upper 'U' value is taken for calculation which is significant only at .01 level, the difference between two treatments is real. 'U' treatment given to the reference group was more effective than the treatment given to the experimental group. It means that the majority of the student teachers have a favourable attitude towards microteaching techniques.

Fifteen per cent of the total pupil teachers found that the objectives of practising the skills were achieved to a large extent.

Fifty per cent found simulated teaching very helpful in practising the skills.

Sixty six per cent found that the attention of the pupils could be served and sustained to a large extent by changing their activities.

PROJECT SUMMARY-08

Project Title

A STUDY OF THE RELATIVE EFFECTIVENESS OF VARIATIONS IN MODELLING IN DEVELOPMENT OF GENERAL TEACHING COMPETENCE IN PUPIL TEACHERS OF ELEMENTARY TEACHER EDUCATION INSTITUTIONS.

Specific Objectives

1. To compare the effectiveness of perceptual and symbolic modelling upon the general teaching competence of pupil teachers.
2. To study the attitude of pupil teachers towards microteaching.
3. To study the difficulties in the implementation of the microteaching technique in the elementary teacher programme.

Hypothesis

1. There exists no significant difference in the GTC scores of teachers trained either through perceptual or through symbolic modelling.

Procedure

This was an experimental study. Two equal groups—reference and experimental—each consisting of 15 pupil teachers were taken, considering their age, sex, qualifications, etc. The reference group was given live demonstrations by a teacher educator while the experimental group was supplied with printed instructional material consisting of model lessons. The following tools were used in the study :

1. Teaching Assessment Scale for teacher educator.
2. Questionnaire regarding the problems of implementation of the microteaching programme.
3. Self evaluation of the microteaching programme—a rating scale for student teachers.
4. Attitude towards microteaching —a rating scale.

Results

As the lower 'U' value is 99 which is not significant even at .05 level, null hypothesis is retained. It means both treatments are equally effective.

1. The attitude of 15 pupil teachers in each group towards the microteaching technique is found to be generally favourable.

2. There are five student teachers in every group who have shown an extremely favourable attitude towards the microteaching technique.
3. There is one student in each group who has shown a neutral attitude towards the microteaching technique.
4. More than 50% of the pupils reported that they found, to large extent, microteaching more difficult than regular practice teaching.
5. More than 50% of the pupil teachers reported that the peer supervision was very helpful and effective in providing feedback.
6. More than 50% of the students reported that they were able to use a variety of reinforcers for increasing pupil participation.

CHAPTER IV

PEER AND SUPERVISORY FEEDBACK

Institution Code No.	*Participating Institutions*	*Investigators*
09	Govt. B.T.I., No. I Raipur (M.P.)	Dr. D.D. Mishra
10	Hunter Training College Morbi (Gujarat)	(i) H.G. Chauhan (ii) Km. N.N. Gohal

Title

A Comparative Study of the Varying Sources of Feedback Upon the General Teaching Competence of Student Teachers.

Background

Student teaching is one of the very important aspects of the teacher education programme. The effectiveness of any student teaching programme largely depends upon the types of supervision provided to the student teacher.

In the present student teaching programme, feedback is not provided in a systematic and logical way ; it is global, vague and usually delayed. Thus the student teachers do not develop their teaching competency to the maximum extent. It does not contribute much for improving the teaching of prospective teachers (Passi, 1976). So, for the improvement of the teacher training programme it is necessary to arrange feedback in a scientific way.

Some sources of feedback were college supervisor, teacher supervisor, peer supervisor, pupil, self, etc. The medium of feedback may be oral, written, or videotape. It may, further, be immediate or delayed. Referring to supervisory feedback,

Borg *et al.* (1970) interprets the evidence to suggest that the function of the supervisor can be served equally effectively by perceptual modelling and videotape feedback. MacDonald and Allen (1967) claim that "self-viewing" is effective for improving teaching competence. However, Acheson (1964) and Yound *et al.* (1971), in their studies, found no significant difference between supervised and unsupervised groups.

In relation to peer supervisor feedback little work has been done. Belt (1967) reported that the comments and suggestions given by fellow students were definitely valuable and useful. Yound (1970), comparing the effectiveness of the tutor supervisor with the peer supervisor team, had reported that students working in the peer supervisor team gave a significantly better performance than those with the tutor supervisor team. McIntyre (1971) found no significant differences in the performance of the students who worked in groups with a tutor and those who worked in groups without a tutor. Sharma *et al.* (1976) also reported the same results as mentioned in McIntyre's study.

However, after a discussion of the aforesaid studies, the following generalisations in relation to feedback were arrived at:

1. The feedback provided by the college supervisor did not produce any significant results in improving teaching competence.
2. The feedback provided by peers produced a significant change in the teaching competence.

These above generalisations are made mostly from the studies conducted abroad. In India, a national project has been taken up by NCERT to answer the following questions :

1. Which of the sources of feedback (supervisor, peer, audio tape) is more effective for improving teaching competence ?
2. What is the effect of immediate or delayed feedback on teaching competence ?

General Objectives

To study the effectiveness of varying sources of feedback, *i.e.*, supervisory feedback and peer feedback on the general teaching competence of the student teacher.

With this objective in view, two research projects were designed and taken up by the participating institutions. The detailed project reports written by the respective investigators are as follows.

PROJECT SUMMARY—09

Project Title

A COMPARATIVE STUDY OF THE EFFECTS OF SUPERVISORY FEEDBACK AND PEER FEEDBACK ON THE GENERAL TEACHING COMPETENCY OF STUDENT TEACHERS.

Specific Objectives

The main objective of the present study is to compare the effectiveness of supervisory and peer feedback on the general teaching competence of student teachers.

Hypothesis

There is no significant difference between the general teaching competence scores of the student teachers receiving feedback from supervisors and those receiving feedback from peers.

Procedure

The experimental method of parallel group design was used in this study. There were two groups : control and experimental. Each consisted of 13 student teachers. For the control group, feedback was given by the college supervisor and for the experimental group feedback was given by peers. The following tools were used :

1. Teaching assessment scale for use by teacher educators.
2. Questionnaire regarding the problems of implementation of the microteaching programme for teacher educators.

3. Self evaluation of the microteaching programme—a rating scale for pupil teachers.
4. Attitude towards microteaching—a rating scale for use by pupil teachers.

Results

There is a significant difference between the general teaching competence score of the student teachers trained through supervisory feedback and those trained through peer feedback, as the 'U' value is more than the table value.
The experimental group was enthusiastic and had an extremely favourable attitude.

More than 50% pupil teachers evaluated that :

1. To a large extent the format of microteaching was satisfactory.
2. To a large extent the content of the microlesson was suitable for practising the skill.
3. To some extent the length of each session was sufficient.

PROJECT SUMMARY-10

Project Title

A COMPARATIVE STUDY OF THE EFFECTS OF SUPERVISORY AND PEER FEEDBACKS ON THE GENERAL TEACHING COMPETENCE OF STUDENT TEACHERS.

Specific Objective

The main objective of the present study is to compare the effectiveness of supervisory and peer feedbacks on the general teaching competence of student teachers.

Hypothesis

There is no significant difference between the general teaching competence scores of the student teachers trained through supervisor feedback and those trained through peer feedback.

Procedure

The experimental method of parallel group design was used. There were two groups—control and experimental. Each consisted of 16 male students. In the control group the feedback was given by the college supervisors and in the experimental group the feedback was given by peer supervisors. The following tools were used :

1. Teaching assessment scale for use by teacher educators.
2. Questionnaire regarding problems of implementation of the microteaching programme for teacher educators.
3. Self evaluation of microteaching programme—a rating scale for pupil teachers.
4. Attitude towards microteaching—a rating scale for the use of pupil teachers.

Results

The lower U' value is 108.5 which is not significant at any level. It means there is no significant difference between the scores of the two groups.

The attitude of the entire group towards the microteaching programme was favourable

Seventy five per cent of the pupil teachers found that they could very freely share their opinion with the supervisor.

Eighty six per cent found the feedback in the subsequent session very helpful in clarifying some of the suggestions they got in the first feedback.

Forty three per cent found that they could manage the class very effectively.

CHAPTER V

SIMULATED AND REAL CONDITIONS

Institution Code No.	*Participating Institututions*	*Investigators*
11	P. T. E. College Panchayati Akhara Gaya (Bihar)	Smt. Urmila Malviya
12	Basic Training Institute Bijalpur Indore (M.P.)	Satish Chandra Vyas

Title

Effectiveness of Microteaching Under Simulated vs. Real Classroom Condition Upon General Teachine Competence and Attitude of the Student Teachers Towards Microteaching.

Background

Microteaching seems to be one of the most promising innovations of teacher education in recent times. However, many aspects related to microteaching are still to be explored. The focus has mostly been on modelling—symbolic/perceptual, settings—simulated/real, feedback—pupil/peer/college supervisor with different techniques—aspects of microteaching by some of the participating instititutions who were involved in the national project undertaken by NCERT.

The present studies are related to the effectiveness of microteaching in the development of general teaching competence and teacher attitude towards teaching with variations brought in the settings, namely, simulated and real classroom conditions. Student teachers do not get enough time for

practice teaching in schools. Teacher educators cannot do full justice to supervision when there are a large number of student teachers. In such situations it becomes imperative to search for an alternative, and teaching under simulated conditions, seems to offer an alternative as a way of compensating the student teacher under training, for lack of actual time spent in practice. This is a relatively recent training technique which can make the transition from course work to field experience more contiguous (Pollack, 1973) and thus, bridge the gap between theory and practice.

Tansay and Unwin (1969) point out that simulation is an "analogue" a "representation of the reality", but the model upon which it is based need not be essentially a mathematical one. Fink (1973) says "Simulation is the controlled representation of realty". The two critical attributes of simulation are : (*i*) involvement or role playing on the one hand, and (*ii*) a simplified but minimally distorted reflection of some given reality.

In the area of teacher education, instructional activities would be conducted through games while behavioural problems in the classroom could be more easily handled through simulation. For bringing the situations of classroom into the college, Jacobs (1960) has tried out the technique of socio-drama in the training of teachers. However, simulation in teacher education has followed two main lines—the first method is that on the role play situation, and the other technique that can be used in simulation is the "basket technique". This method presents a series of situations which might typically occur in the classroom.

Cruick Shank (1969) devised a simulation training programme for student teachers. The unit is called the "teaching problems laboratory" and is intended to give student teachers a chance to make decisions in a life-like classroom situation.

To prove the effectiveness of simulation as a technique, Cruick Shank (1971) identified five of the most common justifications in favour of this: (*i*) Simulation permits student teachers to engage in frequent and severe problems that might not occur during their fieldwork experience, (*ii*) it

can often provide experience in a low-cost model of a high-cost environment, (*iii*) it can compress time by presenting the student with more decision-making points or problem situations, (*iv*) space can also be compressed since simulation can present a variety of school environment to a student teacher which is normally limited to one field experience, and (*v*) simulation has the potential for immediate feedback, making it possible to identify cause-effect relationship for the student teacher. There are studies wherein microteaching as a simulated technique of teacher training has been found to be effective (Lehman, 1970; Lesser, 1973; Binnie, 1972). These studies suggest the efficacy of simulation as a teacher training technique.

However, inspite of the advantages of simulation and the effectiveness of simulated microteaching technique, to what extent simulated teaching is better or worse than training in real conditions needs to be examined.

In brief, a set of studies was devised to answer the following questions :

1. How far would microteaching in simulated and real conditions be effective in developing general teaching competence ?
2. What would be the attitude towards teaching of elementary school teachers ?

General Objectives

1. To study the effectiveness of microteaching in two settings—simulated and real classroom situations—upon the general teaching competence.
2. To study the effectiveness of microteaching in two settings—simulated and real classroom situations—in developing a favourable attitude towards teaching.

To meet the aforesaid general objectives, two studies were undertaken by some of the participating institutions. The summaries of the studies, prepared by the respective investigators, are given below.

PROJECT SUMMARY-11

Project Title

A COMPARATIVE STUDY OF THE EFFECTS OF MICROTEACHING UNDER SIMULATED CONDITIONS AND UNDER REAL CLASSROOM CONDITIONS ON THE GENERAL TEACHING COMPETENCE AND ATTITUDE OF STUDENT TEACHERS TOWARDS MICROTEACHING.

Specific Objectives

1. To compare the effectiveness of microteaching under simulated conditions and under real conditions on the general teaching competence of student teachers.
2. To study the effect of simulated and real conditions of microteaching on the attitude of student teachers.

Hypothesis

1. There is no significant difference between the GTC scores of the microteaching groups under simulated and real classroom conditions.
2. There is no significant difference in the attitude of student teachers when simulated and real classroom conditions of microteaching are used.

Procedure

The experimental method of parallel group design was used. Two groups were used : one experimental and the other control. Both the groups consisted of 15 pupil teachers each. The control group was treated with the traditional teaching technique and the experimental group was treated with the microteaching technique. The following tools have been used :

1. Teaching assessment scale (Form O) for use by teacher educators.
2. Questionnaire regarding problems of implementation of the microteaching programme for teacher educators.

3. Self evaluation of the microteaching programme—a rating scale for use by student teachers.
4. Attitude towards microteaching—a rating scale for use by student teachers.

Results

The findings of the study (U_2=37.50) reveal that the GTC scores of student teachers, when simulated and real classroom conditions are used, differ significantly. This shows that there is a real difference in the GTC scores of student teachers when two conditions (simulated and real) of microteaching are used. The level of significance found is 0.05.

Regarding the attitude of student teachers towards teaching, the t-value was 2.37, which is significant at 0.05 level. It means that the experimental group differs significantly from the control group when the attitude of student teachers towards microteaching is studied.

PROJECT SUMMARY-12

Project Title

A COMPARATIVE STUDY OF THE EFFECTS OF MICROTEACHING UNDER SIMULATED CONDITIONS AND UNDER REAL CLASSROOM CONDITIONS ON THE GENERAL TEACHING COMPETENCE.

Specific Objectives

1. To compare the effectiveness of microteaching under simulated and real classroom conditions on the general teaching competence of student teachers.
2. To study the effect of simulated and real classroom conditions of microteaching on the attitude of student teachers.

Hypothesis

1. There is no significant difference between the GTC scores of the microteaching group under simulated and real classroom conditions.
2. There is no significant difference in the attitude of student teachers towards microteaching when

simulated and real classroom conditions of microteaching are used.

Procedure

The experimental method of parallel group design was used. Two groups were used : one an experimental and the other a control group. Both the groups consisted of 15 pupil teachers each. The control group was treated with the traditional teaching technique and the experimental group was treated with the microteaching technique. The following tools were used :

1. Teaching assessment scale (Form O) for use by teacher educators.
2. Questionnaire regarding problems of implementation of the microteaching programme for teacher educators.
3. Self evaluation of the microteaching programme—a rating scale for use by student teachers.
4. Attitude towards microteaching—a rating scale for use by student teachers.

Results

The t-value was found to be 0.04, which is not significant. This shows that there is no significant difference in the GTC scores of microteaching groups under simulated and real classroom conditions. Thus the null hypothesis (i) is retained.

Again for the attitude of student teachers towards teaching, the t-value (0.05) is not significant. Thus it can be concluded that simulated and real classroom conditions do not affect the attitude of student teachers.

CHAPTER VI

CHANGES IN THE SET OF SKILLS

Institution Code No.	*Participating Institutions*	*Investigators*
14	C.N. Seth, Talini Vidyalaya Ahmedabad (Gujarat)	Buddhidhanbhai L. Trivedi
16	R.V.T.T.I., Jayanagar Bangalore (Karnataka)	i. M.V. Nagaraja ii. H.V. Malathi
17	S.S. T.T.I., B.H. Road Tumkur (Karnataka)	i. G. Sadashivaiah ii. H.N. Jaydevappa

Title

To Study the Effect of Varied Sets of Teaching Skills Using Microteaching on the General Teaching Competence of Student Teachers and Their Attitude Towards Microteaching.

Background

Studies on microteaching conducted during 1975-76 by NCERT in collaboration with CASE (Centre for Advanced Study in Education) Baroda and nine Colleges of Education/ University Departments of Education have provided sufficient evidence that the student teachers taught through the microteaching approach secure higher scores in general teaching competence than the student teachers trained by the traditional method. A few of these studies also compared the effectiveness of different sources (peer vs. supervisor) of feedback and different modelling (perceptual vs. symbolic). The results obtained were inconclusive. Therefore, another set of studies was planned and conducted during 1976-77. The objective

was to study the relative effectiveness of various components of microteaching such as feedback, modelling, conditions, etc.

There are several factors such as the duration and the size of a microclass, the personality characteristics of a student teacher and the nature and number of teaching skills included in a set for training teachers, etc., which may be contributory to the development of teaching competence in general and component skills in particular, in student teachers under the microteaching approach. However, it may be interesting to know how a set of teaching skills and their sequence used in a training programme is likely to affect the development of teaching competence of the trainees. A particular sequence may result in an optimum development, or a particular set of skills as compared to another set of different skills may contribute to greater acquisition of teaching competence. It may be hypothesised that inter-dependence and mutual linkage of skills in a set are likely to contribute more to a higher level of competence than completely unrelated skills in a set.

Further, some skills are more subject specific than others. For example, the skill of experimental demonstration may be necessary for science teachers. Therefore, in the training of teachers of different subject backgrounds, certain specific skills in addition to core teaching skills (common across subjects) should be given practice.

Keeping the aforesaid points in view, three studies were conducted by the participating institutions with the following objectives in view.

General Objectives

1. To compare the effect of training in the sets (A and B) of teaching skills using microteaching on the general teaching competence of student teachers.
2. To compare the effect of training in two sets (A and B) of teaching skills on student teachers' attitude towards microteaching.

Project reports of these studies are given below.

PROJECT SUMMARY-14

Project Title

TO STUDY THE EFFECT OF TRAINING IN SETS (A) AND (B) OF TEACHNG SKILLS USING MICROTEACHING ON THE GENERAL TEACHING COMPETENCE OF ELEMENTARY TEACHERS AND THEIR ATTITUTE TOWARDS MICROTEACHING.

Specific Objectives

1. To compare the effect of two sets A and B, of teaching skills, using microteaching, on the general teaching competence of student teachers.
2. To compare the effect of training in two sets (A and B) of teaching skills on student teachers' attitude towards microteaching.

Hypothesis

1. At the end of the experiment there is no significant difference in the GTC scores of student teachers trained through microteaching when the set of skills is varied.
2. At the end of the experiment there is no significant difference in the attitude of student teachers trained through microteaching when the set of skills is varied.

Procedure

The sample for the study was selected from the students of the first year of the two years course. The sample consisted of 26 students.

The student teachers of both the groups, *i.e.*, reference and experimental, were oriented in microteaching and the teaching skills. The following tools were taken :

1. Teaching assessment scale for teacher educators.
2. Questionnaire regarding problems of implementation of the microteaching programme.
3. Self evaluation of the microteaching programme.
4. Attitude towards microteaching—a rating scale.

Results

There is no significant difference between the mean scores of student teachers trained through microteaching using two different sets of training skills.

The group showed a more positive or favourable attitude towards the microteaching technique. Some (37.5%) of the student teachers found that they could make use of a variety of reinforcers for encouraging pupil participation. Forty eight per cent found the peer supervisors very much helpful and effective in providing feedback.

Forty five per cent found that their peers were able, to a large extent, to play the role of real pupils.

PROJECT SUMMARY-16

Project Title

TO STUDY THE EFFECT OF TRAINING IN TWO SETS (A AND B) OF TEACHING SKILLS USING MICROTEACHING ON THE GENERAL TEACHING COMPETENCE OF ELEMENTARY STUDENT TEACHERS AND THEIR ATTITUDE TOWARDS MICRO-TEACHING.

Specific Objectives

1. To compare the effect of training in two sets (A and B) of teaching skills using microteaching on the general teaching competence of student teachers.
2. To find out the attitude of student teachers towards microteaching.
3. To study the various academic and administrative problems of microteaching in the participating institutions.
4. To understand the reaction of student teachers towards the microteaching technique after the completion of the experiment.

Hypothesis

1. At the end of the experiment there is no significant difference in the general teaching competence scores

of student teachers trained through microteaching where the set of skills is varied.

2. The student teachers are favourable in their attitude towards microteaching.

Procedure

Pre-test, post-test parallel group design was taken up. This design contains pre-training observation of teaching (two lessons each). After that, experimental treatment and finally post training observation (two lessons each) was done. After the experiment, using the rating scale, the attitude of student teachers towards microteaching was obtained. Also, on self evaluation of the microteaching programme the student teachers were given a rating scale and the completed forms were collected.

Only 24 student teachers were involved in this project. As both the groups were experimental groups, 12 student teachers were put in each group. In each group, eleven female student teachers and one male student teacher were involved. The age group ranged between 16 + and 24+. The following tools were used.

1. Teaching assessment scale for use by teacher educators.
2. Attitude towards microteaching—a rating scale for use by student teachers.
3. Self evaluation of the microteaching programme—a rating scale for the use of student teachers.
4. Questionnaire regarding problems of implementing the microteaching programme at the elementary level for use by teacher educators.

Results

There is no significant difference in the general teaching competency scores of student teachers trained through microteaching when the set of skills is varied, as the 'U' value, *i.e.*, 71.0 is not significant at 0.05 level.

The student teachers are found to have a favourable attitude towards microteaching. Some (37.8%) of the pupil teachers found that the feedback in the subsequent session helped them to a large extent to clarify the source of the suggestions they got in the first feedback.

Forty two per cent could, to some extent, secure and sustain the attention of pupils by changing their activities.

Fifty per cent found the feedback sessions very much helpful in developing the skills.

PROJECT SUMMARY-17

Project Title

TO STUDY THE EFFECT OF TRAINING IN TWO SETS (A AND B) OF ELEMENTARY SKILLS USING MICROTEACHING ON THE GENERAL TEACHING COMPETENCE OF ELEMENTARY STUDENT TEACHERS AND THEIR ATTITUDE TOWARDS MICROTEACHING.

Specific Objectives

The general objectives of the study are :

1. To compare the effect of training in the sets (A and B) of teaching skills using microteaching.
2. To find out the attitude of student teachers towards microteaching.
3. To study the various academic and administrative problems of microteaching in the participating institutions.
4. To understand the reactions of student teachers towards the microteaching technique after the completion of the experiment.

Hypothesis

1. There is no significant difference in the general teaching competence scores of student teachers trained through microteaching when the set of skills is varied.
2. The student teachers are favourable in their attitude towards microteaching.

Procedure

Pre-test and post-test parallel group design was followed. There were two groups—reference and experimental. Each consisted of 12 pupil teachers. The reference group was oriented by a teacher educator while the experimental group was supplied with printed instructional material.

This design envisages pre-training observation of teaching (two lessons each). After that, experimental treatment and finally, post training observation (two lessons each) was done. After the experiment using the rating scale, the attitude of student teachers towards microteaching was obtained. Also a rating scale on self evaluation of the microteaching programme was given to the teachers.

Only 24 student teachers were involved in this project. Each group consisted of six female student teachers and six male student teachers. Their age group ranged between 17+ and 20+. The following tools were used for the collection of relevant data for the study :

1. Teaching assessment scale for use by teacher educators.
2. Attitude towards microteaching—a rating scale for use by student teachers.
3. Self evaluation of the microteaching programme—a rating scale for student teachers.
4. Questionnaire regarding the problems of implementing the microteaching programme at the elementary level for teacher education.

Results

As the 'U' value is 43.5 and is not significant at any level, the null hypothesis is rejected. It indicates that the varied sets of skills do not bring out any significant difference in the general teaching competence scores.

The whole sample showed a favourable attitude towards the microteaching technique.

Some (91.6%) of the student teachers found that the female teacher educators were very much helpful and effective in providing feedback.

Only 4.16% found microteaching more difficult than regular practice teaching.

Only 4.16% felt that the negative aspects of their performance should be highlighted more than the positive aspects.

Some (70.83%) felt that they could share their opinions with the supervisors very freely.

CHAPTER VII

PROBLEMS IN THE IMPLEMENTATION OF MICROTEACHING PROGRAMMES

Mort (1946) has reported that American school systems take about 50 years for the adoption of an innovation. Indians are more tradition-bound in comparison to Americans. But in respect of microteaching, Indian teacher educators have proved themselves more innovative. Microteaching was tried on an experimental basis only in 1971.

By 1982 most of the University Departments of Education and Colleges of Education in the country had adopted microteaching. NCERT, which functions as a change agent for the purpose, thinks that the programme must go down to the primary teachers' training level also. In the succeeded session (1983-84), the same strategy, Researchcum-Diffusion, which at the secondary level, was adopted for the primary teachers' level also. Thirty primary teacher training institutions from all over the country were invited to collaborate. In all, 32 teacher educators (22 training institutions) completed the project. One of the objectives of the project was to study the difficulties faced by teacher educators in the implementation of the microteaching programme. A questionnaire with 20 items was given to all the investigators. Eleven items were related with academic difficulties and nine items were related with administrative difficulties. The result of the study is presented below in the facing page.

Table of Results

TABLE XV

PROBLEMS IN THE IMPLEMENTATION OF THE MICROTEACHING PROGRAMME (N=32)

Items	*Yes*		*To Some extent*		*No*	
	f	%	f	%	f	%
1	26	81.25	6	18.75	0	00.00
2	2	06.25	9	28.12	21	65.62
3	26	81.25	6	18.75	0	00.00
4	27	84.37	4	12.50	1	03.12
5	25	78.12	6	18.75	1	05.12
6	25	78.12	5	15.62	2	06.25
7	23	71.87	2	06.25	7	21.87
8	30	93.75	0	00.00	2	06.25
9	22	68.75	5	15.62	5	15.62
10	6	18.75	6	18.75	20	62.50
11	24	75.00	5	15.62	3	09.37
12	18	56.25	5	15.62	9	28.12
13	25	78.12	3	09.37	4	12.50
14	12	37.50	7	21.87	13	40.62
15	29	90.62	3	09.37	0	00.00
16	0	00.00	2	06.25	30	93.75
17	25	78.12	7	21.87	0	00.00
18	27	84.37	1	03.12	4	12.50
19	2	06.25	4	12.50	26	81.25
20	8	25.00	0	00.00	24	75.00

1. Orientation Programme

The first problem about which respondents were asked was related with the orientation programme. As is evident from the table, as many as 81.25 per cent respondents were satisfied with the orientation programme. Only 18.75 per cent needed some help in this regard. In the parallel study, at the secondary level, respondents were also satisfied with orientation sessions. The orientation programme, as presented and recommended in the project, evolved during a decade as a

result of incessant labour of experts in microteaching. Hence it is but natural that most of the teacher educators involved in this project found it satisfactory.

2. Modelling

In the microteaching situation different types of modelling—perceptual, symbolic and audio—may be presented. A majority of respondents in this project (65.62%) were quite at home in selecting modelling according to their convenience. They did not find any difficulty. The problem was felt by 28.12 per cent respondents. Das *et al.* (1980) have also reported that investigators at the secondary level did not find any difficulty in modelling. It is worth noting here that teacher educators who were inducted in this project had some experience of presenting modelling through demonstration lessons. Modelling in microteaching is a scientific variation of the same activity. Hence, the majority of the investigators did not find any difficulty in it.

3. Format of Microlesson Plan

The investigators in the project were provided with a microlesson plan format consisting of teacher activity, pupil activity and components used. As many as 81.25% respondents have found this format quite agreeable and workable. Only 18.75% respondents found that some improvement was needed in the format. In the previous study, at the secondary level, Das *et al.*, (1980) have also reported "by and large, all the investigators agreed upon the format of the microlesson plan." In this study a few investigators have suggested that format should change according to skills. A uniform format for all the skills may not work effectively.

4. Assessment of Teaching Skills

The investigators involved in the project were provided with a set of assessment/observation schedules for the skills selected for training purposes. These schedules were meant primarily for feedback to be provided to teachers. As many as 84.37% respondents were satisfied with the procedure used for the assessment of skills through tallies and ranks for each

component. Only 12.50% respondents thought that this procedure was satisfactory to some extent but needed some improvement. In the previous study at the secondary level, (Das *et al.*, 1980) have found only about 33% investigators in agreement with the assessment procedure. The divergence of opinion among the investigators oftne secondary level and those of the primary level may be due to the difference in the levels of their education. Educators at the secondary level are invariably M. Eds. with knowledge of evaluation and measurement whereas many of the educators at the primary level have no previous knowledge in this field. Hence the educators at the secondary level could find fault with the assessment procedures and their counterparts could not think of a better mode of assessment.

5. Sequence of Teaching Skills

Each investigator has to select a set of six teaching skills for the conduct of the project. As many as 78.12% found these sets quite agreeable and workable, whereas only 18.75% found room for some improvement. In the secondary level study also (Das *et al.*, 1980) about 67% investigators had found the sequence satisfactory. Secondary level educators had only one set of five skills whereas the primary level educators had three alternate sets of six skills.

6. Practice in Simulation

The microteaching programme is usually conducted in a simulated situation. But simulation has its own difficulties and problems. Some persons find it very difficult to organise. In this project a very large majority (78.12%) found simulation satisfactory, 15.62% found some difficulty in simulated practice, whereas only 6.25% are of the opinion that it is not practicable at all. At the secondary level study the majority of the respondents agreed with the practice of teaching skills in simulated conditions. Only nine per cent have suggested some change in the simulated setting. Simulated teaching gives a thrilling experience. It is an innovation in the field of teacher education. Practice teaching programmes which had reached a blind alley were rejuvenated with

the introduction of simulated teaching. It is quite natural that all teacher educators have liked simulated practice.

7. Practice in Real Situation

Teacher educators who undertook the experiment in real situations have found their experiment gratifying. And the teacher educators who went to real situations after training pupil teachers in simulated situations have also found practice teaching in real situations satisfying. Only 21.87% teacher educators have reported that practice in a real situation is full of problems whereas about 71.85% teacher educators found no problem in providing training in real situations.

8. Feedback Procedures

Feedback, varied and immediate, is the strongest point in the microteaching programme. Feedback is provided by peers, by supervisors, and by oneself through some mechanical gadgets. It is generally objective and based on well developed instruments. In this experiment, 93.75% respondents who conducted the experiment agree that feedback procedure as adopted in the microteaching situation is effective as well as feasible. The remaining members feel that the feedback procedures are not effective.

9. Teaching Cycles

In the present experiment, two cycles of microteaching were provided for training one skill. One cycle consisted of one teach, one feedback, one plan, one reteach and one refeedback session. As many as 68.75% respondents who participated in the present experiment found these cycles sufficient for the purpose of training in teaching skills. Only 15.62% were partially satisfied whereas an equal number (15.62%) were not satisfied at all. It is natural to find some variation due to different composition of pupil teachers and their proficiency levels. The cycles may be sufficient for average and above average pupil teachers but they may not be sufficient for below average pupil teachers.

10. Microteaching Literature

This experiment was conducted at the national level including pupil teachers of different language groups. Literature on microteaching is available in some languages whereas in other languages no literature is available. Teacher educators themselves were expected to find out literature in these languages and in case such literature was not available, they were expected to produce and publish such literature at least for these purposes. As many as 62.50% teacher educators managed to get such literature on microteaching. A few (18.75%) faced some difficulties but they surmounted then afterwards. Teacher educators at the secondary level had also found difficulty in managing literature on microteaching (Das *et al.*, 1980).

11. Professional Expertise

Microteaching is an innovation in the field of teacher education. For the adoption of any innovation, expert guidance is usually essential. In connection with the experiment, about three-fourth majority (75%) were able to get guidance from local experts. Only 9.37% teacher educators have expressed that sufficient local expertise was not available for consultation. Actually, microteaching has become a part of the training programme in most of the secondary training colleges. Now in these institutions ample expertise has been developed from where primary level teacher educators can benefit. In the secondary level experiment (Das *et al.*, 1980) this type of help was wanting because the experiment was conducted at a time when the innovation of microteaching was not widely disseminated.

Administrative Problems

Time Table

The time table of training colleges where teacher educators have to teach one or two periods per day gets disturbed under the pressure of the microteaching experiment. This disturbance produces resistance among the members of the staff. They are liable to create different types of hindrances. A large majority (56.25%) have found it difficult to manage with the

regular time table. About one-third (28.12%) have managed the experiment, without any conflict, with the regular time table. Only 15.62% respondents reported that difficulty was felt by them to a limited extent.

Space for Experiment

The microteaching experiment needs separate rooms for different groups for teaching, feedback and planning whereas in the normal course a fewer number of rooms suffice. In the microteaching experiment several rooms were required. Therefore, 78.1% respondents have found it difficult to manage sufficient space for conducting the present experiment. Only a very insignificant number (12.50%) of respondents have felt no difficulty in this direction.

Financial Assistance

For each institution a grant of Rs. 300/- was given to meet the contingent expenditure to be incurred in this experiment. This amount was not considered sufficient by 37.5% respondent, whereas 40.62% managed the experiment without any difficulty.

Cooperation from Principals, Colleagues and Trainees

The success of any innovation depends on the cooperation of the principal and other colleagues of the organisation. In the school system, an innovation, to succeed, must be supported by the principal, other teachers and pupil teachers. In this project, a majority of the respondents (90.62%) conducting the research have reported that they got the support of their principals and other colleagues, namely, teachers and pupil teachers. At the secondary level also Das *et al.*, (1980) have stated that "except one, all the investigators report that they could get cooperation from the principal, colleagues and teacher trainees".

Clerical Assistance

Clerical assistance is needed in conducting a research project. But, perhaps, at the primary teacher training level,

clerical facility is not available in the institution itself. It is perhaps due to this reason that most of the investigators (93.75%) have stated that they could not get any clerical assistance from the institutions. They managed to complete the project on their own without any clerical assistance. At the secondary level experiment all investigators (Das *et al.*, 1980) have reported to have got clerical assistance. The difference is in the fact that secondary level training institutions have clerical facilities whereas at the primary level there is no such facility available.

Cooperation from Practising Schools

Most of the investigators in the project had conducted their experiment in a simulated situation and the problem of cooperation from practising schools must have come up only for integration of skills. Even then, the majority of the investigators (78.12%) recorded that there was no difficulty in getting cooperation from the practising schools. In the secondary level project also, all investigators except one, have had full cooperation from their practising schools.

Cooperation from Education Departments

Since primary teacher training institutions run under the control of the respective State Departments of Education, it was essential to get approval from the departments, otherwise lessons under simulated conditions would not be counted. The National Council of Educational Research and Training issued a request to all the Directors of Public Instruction of different states to extend their cooperation to these investigators in conducting experiments. The result was that 37% investigators have reported that these directorates have cooperated with them. Only 12.50% investigators did not get cooperation from their directorates. In the case of secondary level experiment, Das *et al.* (1980) have found 50 investigators to have reported that their respective universities did not recognise the equivalence of simulated lessons and did not cooperate with the investigators. It appears that educational officers of government education departments are more innovative

than university teachers who have the power of sanctioning equivalence to simulated lessons.

Difficulty Regarding Research Tools

Investigators were expected to use four research tools in this project. Tools were already prepared and used in other projects. As a matter of fact, an average researcher might have no difficulty in using them. But most of the investigators involved in this project had no experience of any research. They had neither been trained for research not had they undertaken any research project prior to this. Even then they (81.25%) report that they did not find any difficulty in using these tools. Only 12.50% faced some difficulty but they surmounted them.

Miscellaneous

Investigators of the project had been asked if they had faced any other difficulties in conducting this project. A majority of them (75%) reported that they did not have any major difficulty in conducting and completing this project. They were able to solve any minor difficulty with the cooperation of other colleagues including the principals.

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APPENDIX—I

Institution Code No.	Participating Institutions	Investigators
01	P.T.E. College P.O. Bangara (via) Jalalpur Bazar Dist. Saran (Bihar)	Pramod Ranjan Sinha
02	Shiksha Charcha P.O. Sriniketan Dist· Birbhum (West Bengal)	Nilmoni Kundu
03	Basic Training Centre P,O. Udarband Dist. Cachar (Assam)	i. K.N. Nath ii. B.C. Sinha
04	Lokbhasti Sanosra (Gujarat)	Narendradev Pathak
05	Govt. S.T.C. School Nanta Palace Kota (Rajasthan)	i. Chandra Shekhar ii. N.R. Bhagwani
06	Sevasadan Jr. College of Education Pune (Maharashtra)	S.N. Parchure
07	Govt. Basic Training School Attingal, Trivandrum (Kerala)	i. I.A. Janardan Nair ii. K. Gopinathan
08	A.E.S. Jr. College of Education Ahmednagar (Maharashtra)	S.K. Kale
09	Govt. B.T.I. No 1 Raipur (M.P.)	Dr. D.D. Mishra

10	Hunter Training College Morbi (Gujarat)	i. H.G. Chauhan ii. Km. N.N. Gohal
11	P.T.E. College Panchayati Akhara Gaya (Bihar)	Smt. Urmila Malviya
12	Basic Training Institute Bijalpur, Indore (M.P.)	Satish Chandra Vyas
13	Department of State Educational Research and Training Bangalore (Karnataka)	K. Satyanarayan Singh
14	Seth C.N. Talini Vidyalaya Ahmedabad (Gujarat)	Buddhidhambhai L. Trivedi
15	Normal School Silchar Dist. Cachar (Assam)	i. Saadilah Chaudhury ii. Brindra Kumar Sinha
16	R.V.T.T.I. Jayanagar Bangalore (Karnataka)	i. M.V. Nagaraja ii. H.V. Malathi
17	S.S.T.T.I. B.H. Road, Tumkur (Karnataka)	i. G. Sadashivaiah ii. H.N. Jayadevappa

APPENDIX—II

TEACHING ASSESSMENT SCALE
(FORM 0)

Tool I for Teacher Educators

Instructions

The scale contains 20 items comprising different aspects of teaching. Specifications of each item have also been given. You are to rate the p erformance of the teacher on each item on a seven point scale. Encircle the point which indicates your assessment. The total score of the teacher on all the 20 items indicates the level of his performance.

Teacher.....Class..... Subject .....

Topic... .....Date.....Observer

S. No	Item	Specification	Extremely Weak	Very Weak	Weak	Average	Good	Very Good	Excellent
1.	Appropriateness of instructional objectives	Clarity, relevance to the content, adequacy with reference to the domains and level of objectives, attainability in terms of pupil outcomes	1	2	3	4	5	6	7
2.	Content properly organised	Logical organisation according to content and psychological organisations per need of the pupil	1	2	3	4	5	6	7

3.	Creating set for introducing the lesson	Greeting, accepting Greeting, securing Attention and giving instructions, establishing rapport, ensuring availability of facilities like chalk, duster, aids, apparatus, etc.	1 2 3 4 5 6 7
4.	Lesson introduced effectively	Linking with past experience, link between introduction and main part, use of appropriate devices/teachniques like questioning, examples, exhibits, etc.	1 2 3 4 5 6 7
5.	Questions properly structured	Structuring questions at different levels which are gramatically correct, precise and relevant to content	1 2 3 4 5 6 7
6.	Questions well delivered and distributed	Questions delivered with appropriate speed, with proper intonation and pitch, allowing pause for thinkirg and questions well distributed covering even non-volunteers	1 2 3 4 5 6 7
7.	Pupil responses properly handled	Handling pupil responses using techniques like promptinge, liciting further information, refocussing and asking critical awareness questions	1 2 3 4 5 6 7
8.	Explanation clear and coherent	Clarity, continuity, relevance to the content using beginning concluding statements covering essential points. Appropriateness to the	1 2 3 4 5 6 7

		situation, narration according to the situation, gestures, the modulations of voice							
9.	Used appropriate examples for illustration	Simple and interesting and relevant to the points being explained	1	2	3	4	5	6	7
10.	Used appropriate teaching aids for illustration	Relevant to content, appropriate to the pupil's level, proper display and appropriate use, involvement of pupils	1	2	3	4	5	6	7
11.	Varied stimuli for securing and sustaining pupil attention	Appropriate body movements, gestures. Change in intonation and pitch, change in sensory focus, change in interaction pattern and pausing. Aural visual switching and pupils' physical participation	1	2	3	4	5	6	7
12.	Used appropritate verbal and non-verbal reinforcers.	Use of praise words, statements, accepting and using pupil ideas, use of pleasant and approving gestures and expressions ; writing pupil answers on black board	1	2	3	4	5	6	7
13.	Appropriate pacing of the lesson	Adjusting the speed of the lesson to the level of the pupils	1	2	3	4	5	6	7
14.	Promoting pupil participation	Providing opportunity to pupils to increase participation through asking questions, creating climate of participation, use of silence and non-verbal cues, calling upon pupils' physical participation	1	2	3	4	5	6	7
15.	Proper use of black board	Legible, neat, adequate with reference to the content covered	1	2	3	4	5	6	7

16.	Appropriate closure of the lesson	Summarisation, establishing link between the present learning with earlier as well as future learning, and creating a sense of achievement in pupils	1	2	3	4	5	6	7
17.	Using drill and practice	Representation to be done (words, pronunciation, statements, etc.) relevant to the content covered and level of the pupils	1	2	3	4	5	6	7
18.	Assessment of the pupils' progress	Relevant to the instructional objectives, used appropriate questions and observation	1	2	3	4	5	6	7
19.	Diagnosis of pupil learning difficulties and taking appropriate remedial measures to remove them	Identifying learning difficulties along with causes, remedial measures suited to the type of learning difficulties and the level of pupils	1	2	3	4	5	6	7
20.	Appropriate management of the class	Attending behaviours reinforced and direction given to eliminate non-attending behaviour, clarity of directions, appropriate handling of pupil's disruptive behaviour	1	2	3	4	5	6	7

APPENDIX—III

QUESTIONNAIRE REGARDING THE PROBLEMS OF IMPLEMENTION OF THE MICROTEACHING PROGRAMME

Tool 2 for Teacher Education

Name of Teacher Educator.....
Institution.....
Experience of Microteaching..... ...
Instructions : Put a tick mark (√) over the response which is your answer.

A. Academic

1. (*a*) Are you satisfied with the orientation sessions before practising the skills in microteaching ? Yes/Some extent/No
   (*b*) If no, give reasons.
2. (*a*) Do you find any difficulty in presenting the model (perceptual/symbolic/audio) ? Yes/Some extent/No
   (*b*) If yes, mention the difficulty.
3. (*a*) Do you agree with the format of the Microlesson Plan ? Yes/Some extent/No
   (*b*) If not, why ?
4. (*a*) Are you satisfied with assessment procedure of teaching skills ? Yes/Some extent/No
   (*b*) If not, what difficulties have you faced ?
5. (*a*) Do you agree with the sequence of teaching skills undertaken in the project ? Yes/Some extent/No
   (*b*) If not, what should be the sequence ?
6. (*a*) Are you satisfied with the practice of teaching skills under simulated conditions ? Yes/Some extent/No
   (*b*) If not, why ?
7. (*a*) Are you satisfied with the practice of teaching skills with real students ? Yes/Some extent/No
   (*b*) If not, why ?

8. (*a*) Do you agree with the feedback procedure ? Yes/Some extent/No
   (*b*) If not, why ?
9. (*a*) Were the number of cycles for practising each of the skills sufficient ? Yes/Some extent/No
   (*b*) If not, give reasons.
10. (*a*) Did you face any problem getting literature on microteaching in regional language ? Yes/Some extent/No
   (*b*) If yes, state the problem.
11. (*a*) Are you satisfied with the professional expertise available in microteaching at your place to conduct the project ? Yes/Some extent/No
   (*b*) If not, give reasons.

B Administrative

12. (*a*) Do you find any problem in conducting the project within regular time table/institution time-table ? Yes/Some extent/No
   (*b*) If yes, state the difficulty.
13. (*a*) Did you find enough space for conducting the project ? Yes/Some extent/No
   (*b*) If not, how did you manage ?
14. (*a*) Did you face any difficulty with regard to financial assistance ? Yes/Some extent/No
   (*b*) If yes, state the nature of difficulty.
15. (*a*) Could you get cooperation from the Principal, colleagues and student-teachers ? Yes/Some extent/No
   (*b*) If not, from whom could you not get cooperation and why ?
16. (*a*) Did you face any difficulty in getting clerical assistance from the College/Institution ? Yes/Some extent/No
   (*b*) If yes, state the nature of difficulty.
17. (*a*) Did you get cooperation from the practising schools ? Yes/Some extent/No
   (*b*) If not, why ?
18. (*a*) Did you get cooperation from the Education Department ? Yes/Some extent/No
   (*b*) If not, state reasons.
19. (*a*) Did you find any difficulty in using tools in the project ? Yes/Some extent/No
   (*b*) If yes, mention the difficulty.
20. State any other problem(s) relating to the project not mentioned above.

APPENDIX—IV

SELF EVALUATION OF MICROTEACHING PROGRAMME— A RATING SCALE

Tool 3 for Student Teachers

Name of Teacher Educator————————Roll No.————————————
Sex————Age————————Years———— Months ————————
Subject taught————————————————————————————

Instructions

You have been practising teaching skills in the microteaching technique. Twenty six questions are given below. Please react to each one of them freely and frankly. There are 5 numbers against each question. Read a question, make up your mind and encircle the number that expresses your feeling.

	Not at all	*Very little*	*To some extent*	*To a large extent*	*Very much*
1. Was the format of microlesson plan satisfactory ?	0	1	2	3	4
2. Was the content of microlesson suitable to practise the skill ?	0	1	2	3	4
3. Were the objectives of practising the skills achieved ?	0	1	2	3	4
4. Was the length of each session sufficient ?	0	1	2	3	4
5. Were you satisfied with the length of replanning sessions ?	0	1	2	3	4
6. Were the feedback sessions helpful in developing the skills ?	0	1	2	3	4
7. Were the peer supervisors helpful and effective in providing feedback ?	0	1	2	3	4
8. Were the teacher educators helpful and effective in providing feedback?	0	1	2	3	4

9.	Was the feedback clear and pinpointed to make you aware of your strong and weak points ?	0	1	2	3	4
10.	In the feedback sessions, were the peer supervisors emphasising only the positive aspects ?	0	1	2	3	4
11.	Do you feel that the negative aspects of your performance should be highlighted more than the positive aspects ?	0	1	2	3	4
12.	Do you think the models (perceptual/symbolic/audio) presented on each skill were effective for developing the teaching skills ?	0	1	2	3	4
13.	Could you freely share your opinions with the supervisors ?	0	1	2	3	4
14,	Do you feel that the feedback in subsequent teach sessions has been of the same seriousness as in the first feedback ?	0	1	2	3	4
15.	Did the feedback in the subsequent sessions help you to clarify some of the suggestions you got in the first feedback ?	0	1	2	3	4
16.	Do you think the practice of the skill of questioning has helped you in constructing good questions and delivering them properly in the classroom ?	0	1	2	3	4
17.	Could you secure and sustain the attention of pupils by changing your activities ?	0	1	2	3	4
18.	Could you make use of a variety of reinforcers for encouraging pupil participation ?	0	1	2	3	4
19.	Did your practice in the skill of narration improve your class room communication ?	0	1	2	3	4
20.	Could you recite poems and small prose passages in a more effective and appealing way ?	0	1	2	3	4
21.	Could you manage the class more efficiently ?	0	1	2	3	4
22.	Could you use the skill of dramatisation effectively in your normal teaching ?	0	1	2	3	4

23. Were your peers able to play the role of real pupils ?	0	1	2	3	4
24. Was the simulated teaching helpful in practising the skills ?	0	1	2	3	4
25. Did you find microteaching more difficult than regular practice teaching ?	0	1	2	3	4
26. Did you feel that tae organisation of the programme lacked proper planning ?	0	1	2	3	4

APPENDIX—V

ATTITUDE TOWARDS MICROTEACHING—A RATING SCALE

Tool 4 for Student Teachers

Name of the student teacher..... .....

Sex.....Age.....Years..... Months .....

Teaching experience, if any.....

Lessons given using microteaching ....

Instructions

You have used microteaching for learning teaching skills. Below, twenty statements are given. Read each of these statements and think how you feel about it. On the basis of your agreement/disagreement level encircle the relevant number as mentioned below :

(5) Strongly agree
(4) Agree
(3) Slightly agree
(2) Disagree
(1) Strongly Disagree

Sessions attended :

You may give your true feelings. It will be helpful in improving microteaching sessions :

1. Microteaching helps to face the classroom situation confidently.	5	4	3	2	1
2. Microteaching helps to learn each skill well.	5	4	3	2	1
3. Small class makes the sessions for practising skills easier.	5	4	3	2	1
4. Microteaching in the Teachers' Training Institutes helps save a lot of time and energy.	5	4	3	2	1
5. Sometimes microteaching sessions become boring.	5	4	3	2	1
6. Continuity of teaching is disturbed by practising teaching skills through microteaching.	5	4	3	2	1
7. Practising skills through microteaching increases awareness of teaching behaviour.	5	4	3	2	1
8. Specific feedback immediately after the microlesson helps in improving performance.	5	4	3	2	1

9.	Constructive suggestions from classmates for improving performance is the strength of microteaching.	5	4	3	2	1
10.	Supervisors tend to become critical of performance in microlessons.	5	4	3	2	1
11.	Abrupt beginning and ending of microlessons takes life out of teaching.	5	4	3	2	1
12.	Microteaching sustains interest throughout practice teaching.	5	4	3	2	1
13.	Skill training helps in developing insight in teaching.	5	4	3	2	1
14.	After microteaching practice it is difficult to adjust to normal classroom teaching.	5	4	3	2	1
15.	The duration of microlesson is too short for worthwhile practice session.	5	4	3	2	1
16.	Organisation of microteaching session creates a lot of confusion.	5	4	3	2	1
17.	Microteaching helps in understanding the complex teaching process.	5	4	3	2	1
18.	Content is ignored in microteaching.	5	4	3	2	1
19.	Observation of microteaching lesson is difficult for the trainees.	5	4	3	2	1
20.	Microteaching develops a greater concern for self improvement.	5	4	3	2	1

APPENDIX—VI

Teaching Skills at the Elementary Level

1. Observation Schedule for Skill of Narration

Name of the Student Teacher .....

Concept ..... Class ——————————

Session : Teach/Reteach—————————— Duration ——————————

Date —————————————— Supervisor ——————————

Instructions

There are three coloumns in the Observation Schedule used for observing a lesson by a teacher using the skill of narration. The first column contains the list of components. As is well known, components are behaviours that a teacher is expected to exhibit in the classroom while using the skill. The second column contains the rating points from one to seven written against each component. The observer has to rate the teacher for each component behaviour by encircling one of the numbers against the component. If the teacher has appropriately exhibited a particular behaviour several times the observer may encircle seven (7) to indicate that the teacher has used the component successfully. In case a teacher does not exhibit a particular behaviour or uses it poorly the observer shall encircle one (1). The third column provides space for writing qualitative remarks and other occurrences and incidents to be used for feedback. The points on the scale indicate the following :

1. Extremely weak
2. Very weak
3. Weak
4. Average
5. Good
6. Very Good
7. Extremely Good.

Tallies	*Behavioural Components*	*Rating Scales*	*Remarks*
	1. Language appropriate to the level of children.	1 2 3 4 5 6 7	
	2. Language appropriate to the situation.	1 2 3 4 5 6 7	
	3. Change in the pitch of voice	1 2 3 4 5 6 7	
	4. Change in forms of sentences	1 2 3 4 5 6 7	
	5. Using gestures	1 2 3 4 5 6 7	
	6. Continuity in narration	1 2 3 4 5 6 7	

2. Observation Schedule for the Skill of Encouraging Pupil Participation

Name of the student teacher.....
Concept.....Class.....
Session : Teach/Reteach.....Duration .....
Date.....Supervisor.....

Instructions

There are three columns in the observation schedule to be used for the skill of 'Encouraging Pupil Participation'. The first column contains seven behavioural components of the skill which a student-teacher is expected to exhibit in the classroom while using the skill.

The second column contains the rating scale having points 1 to 7 written against each component. The observer has to rate the student-teacher for each component behaviour by encircling one of the numbers against the component. If the teacher has appropriately exhibited a particular behaviour several times the observer may encircle seven (7) to indicate that the teacher has used the component successfully. In case a teacher does not exhibit a particular behaviour or uses it poorly the observer shall encircle one (1). The third column is for remarks. The points on the rating scale indicate the following :

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent.

Tallies	*Behavioural Components*	*Rating Scale*	*Remarks*
	1. Asking questions requiring answers in more than two or three sentences.	1 2 3 4 5 6 7	
	2. Redirection of questions (Asking same questions to other pupils).	1 2 3 4 5 6 7	
	3. Using reinforcers (verbal and non-verbal).	1 2 3 4 5 6 7	
	4. Using pupils' own ideas in discussion.	1 2 3 4 5 6 7	
	5. Encouraging pupil-teaching and pupil interaction.	1 2 3 4 5 6 7	
	6. Calling upon pupil's physical involvement.	1 2 3 4 5 6 7	
	7. Using appropriate pauses.	1 2 3 4 5 6 7	

3. Observation Schedule for the Skill of Recitation

Name of the student teacher .....
Class.....Concept.....
Session : Teach/Reteach .....
Date : ..... Supervisor .....

Instructions

The observation schedule for the skill of recitation contains three columns. The first column indicates the tallies against different components of the skill. The second column specifies components in the form of desirable and undesirable behaviours. The third column contains rating from one to seven against each of the components. The rating scale indicates the adequacy of the occurrence of the components. The points on the scale indicate the following :

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

An observer should indicate the rating against each component by encircling the number which represents the assessment. For rating undesirable behaviours, it is to be borne in mind that the higher the number of tallies, the lower the rating.

Tallies	*Bahavioural Components*	*Rating Scale*	*Remarks*
	1. Clarity of voice (clear distinct speech audibility, projecting feeling through intonations).	1 2 3 4 5 6 7	
	2. Correct pronunciations.	1 2 3 4 5 6 7	
	3. Rhythm (pitch).	1 2 3 4 5 6 7	
	4. Gestures, facial expressions (movement of limbs and body).	1 2 3 4 5 6 7	
	5. Speed (content age level, previous knowledge).	1 2 3 4 5 6 7	
	6. Fluency (systematic flow of the syllable, mastery over the content).	1 2 3 4 5 6 7	

4. Observation Schedule for the Skill of Dramatisation

Name of the student teacher.....
Concept.....Class.....
Session : Teach/Reteach.....Duration.....
Date.....Supervisor.....

Instructions

The observation schedule-cum-rating scale for the skill of dramatisation comprises three columns. The first column indicates the serial number of the components. The second column specifies the components and the third column contains rating from 1 to 7 against each of the components. The rating scale indicates the adequacy of the occurrence of the components. The points on the scale indicate the following :

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

The supervisor/observer has to rate the teacher for each component, behaviour by encircling one of the numbers against the component. If the teacher has appropriately demonstrated a particular component the supervisor may encircle seven to indicate that the teacher has used the component successfully. In case a teacher does not show a particular behaviour or uses it poorly, the supervisor shall encircle one.

Tallies	*Behavioural Components*	*Rating Scale*	*Remarks*
	1. Appropriateness to situation (suits the context content and level of learner).	1 2 3 4 5 6 7	
	2. Synchronisation of voice and gesture (synchronization of emotions, language, speech, body movement/ gesture, etc.)	1 2 3 4 5 6 7	
	3. Variations with regard to presentation (e.g. monologue, dialogue, etc.	1 2 3 4 5 6 7	
	4. Conversational language (have the elements and vocabulary based on local dialect, *i.e.*, the talking language and not the bookish one).	1 2 3 4 5 6 7	

Additional Remarks (if any).

A. Components not used by the teach/reteach session (though required)

B. Components used by the teacher but not needed in the teaching (cite example)

C. Components used by the teacher but not appropriately used (cite situations)

D. Weak points of the teach session

E. Strong points of the teach session

F. Suggestions for reteach session.

5. Observation Schedule for the Skill of Classroom Management

Name of the student teacher : .....

Class ..... Date .....

Concept .....

Duration ..... Session : Teach/Reteach.....

Supervisor .....

Instructions

This observation-cum-rating scale for the skill of classroom management comprises four columns. The first column indicates tallies against different components of the skill. The second column specifies the components of the skill and the third contains rating from one to five against each of the components. The rating scale indicates the adequacy of the occurrence of the components of the skill. The fourth column is meant for comments. The observer may give the comments when there is any instance of wrong use of any component or there is any occasion when there is a need to use some component of the skill but the teacher failed to use that component. The points on the rating scale indicate the following :

1. Never
2. Once in a while
3. Occasionally
4. Sometimes
5. Usually
5. Most of the time
7. Always

Tallies	*Behavioural Components*	*Rating Scale*	*Remarks*
	1. Calls pupils by their names.	1 2 3 4 5 6 7	
	2. Makes norms of classroom behaviour explicit to pupils.	1 2 3 4 5 6 7	
	3. Gives clear directions.	1 2 3 4 5 6 7	
	4. Ensures sufficient work for each pupil.	1 2 3 4 5 6 7	
	5. Keeps pupils in eye span.	1 2 3 4 5 6 7	
	6. Recognises and reinforces attentive behaviours.	1 2 3 4 5 6 7	
	7. Checks inappropriate behaviour immediately.	1 2 3 4 5 6 7	

APPENDIX—VII

CORE TEACHING SKILLS

1. **Observation Schedule-cum-Ratirg Scale for Skill of Reinforcement**

Name of the Student Teacher.....Class.....
Concept.....Time .....
Session : Teach/Reteach.....
Date .....Supervisor.....

Instructions

The observation schedule-cum-rating scale for the skill of reinforcement comprises three columns. The first column indicates the tallies against different components of the skill. The second column specifies the components of the skill and the third column contains rating from one to seven against each of the components. The rating scale indicates the adequacy of the occurrence of the components. The points on the scale indicate the following:

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

Tallies	*Components*	*Rating Scale*
(*i*)	Use of praise words	1 2 3 4 5 6 7
(*ii*)	Repeating and rephrasing pupil responses.	1 2 3 4 5 6 7
(*iii*)	Use of Positive non-verbal reinforcers (including extra-verbal cues but excluding writing pupil answers on the blackboard).	1 2 3 4 6 6 7
(*iv*)	Writing pupils' answers on the blackboard.	1 2 3 4 5 6 7
(*v*)	Use of discouraging words.	1 2 3 4 5 6 7
(*vi*)	Use of negative non-verbal reinforcers.	1 2 3 4 5 6 7
(*vii*)	Inappropriate use of reinforcement.	1 2 3 4 5 6 7

2. Observation Schedule for Skill of Probing Questioning

Name of the student teacher.....
Class.....Concept.....
Duration.....Supervisor.....
Session : Teach/Reteach .....Date.....

Instructions

The observation schedule-cum-rating scale for the skill of probing pupil responses comprises four columns. The first column indicates tallies against different components of the skill. The second column specifies the components of the skill and the third indicates rating from one to seven against each of the components. The rating scale indicates mastery of the different components of the skill. The fourth column is meant for comments. The observer may give the comments when there is any instance of wrong use of any procedure of probing pupil response or there is any occasion when there is a need to use some component of the skill but the student teacher failed to use that component. The points on the rating scale are :

1. Extremely Weak
2. Very Weax
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

Tallies	*Components*	*Rating Scale*
	(*i*) Prompting	1 2 3 4 5 6 7
	(*ii*) Seeking further information	1 2 3 4 5 6 7
	(*iii*) Refocussing	1 2 3 4 5 6 7
	(*iv*) Increasing critical awareness.	1 2 3 4 5 6 7

3. Observation Schedule for the Skill of Illustrating with Examples

Name of the student teacher.....
Class .....Concept.. .....
Session : Teach/Reteach.....
Date.....Supervisor.....

Instructions

The Observation Schedule for the skill of illustrating with examples comprises six columns. The first indicates the serial number of the example. The second to fourth columns stand for indicating whether the example is simple, interesting and relevant. The fifth column specifies the approach (inductive/deductive, inductive-deductive) used by the teacher. The sixth column stands for pupil involvement in formulating the examples.

Ex. No.	*Simple*	*Interesting*	*Relevant*	*Approach*	*Pupil Involvement*
1	2	3	4	5 (I) (D) (I–D)	6 (+ *)

I stands for inductive approach
D stands for deductive approach
I—D stands for inductive-deductive approach
+ stands for non-involvement of pupils in developing the examples
** stands for involvement of pupils in developing the examples*

4. **Rating Schedule for Skill of Illustrating with Examples**

Name of the Student Teacher.....
Class .....Concept.....
Session : Teach/Reteach .....
Supervisor.....Date.....

Instructions

The rating scale given below for the skill of illustrating with examples comprises two columns. The first indicates the components of the skill and the second column indicates rating from one to seven against each of the components. The points on the rating scale indicate the following:

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

An observer should indicate his rating against each component by encircling the number which indicates his assessment.

Components	*Rating Scale*						
Examples used were simple	1	2	3	4	5	6	7
Examples used were interesting	1	2	3	4	5	6	7
Examples used were relevant	1	2	3	4	5	6	7
Approach used was appropriate	1	2	3	4	5	6	7
Pupil involvement was adequate	1	2	3	4	5	6	7

5. Observation Schedule for Skill of Stimulus Variation

Name of the Student Teacher.....
Class.....Concept.....
Session : Teach/Reteach.....
Date.....Supervisor.....

Instructions

The observation schedule-cum-rating scale for the skill of stimulus variation comprises three columns. The first column indicates the tallies against different components of the skill. The second column specifies the components of the skill. The third one contains rating from one to seven against each of the components. The rating scale indicates the adequacy and appropriateness of the occurrence of the components. The points of the scale indicate the following:

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

An observer should indicate his rating against each component of the skill by encircling the number which represents his assessment.

Tallies	*Components*	*Rating Scale*
	(*i*) Movement	1 2 3 4 5 6 7
	(*ii*) Gestures	1 2 3 4 5 6 7
	(*iii*) Change in voice	1 2 3 4 5 6 7
	(*iv*) Focussing	1 2 3 4 5 6 7
	(*v*) Change in interaction pattern	1 2 3 4 5 5 7
	(*vi*) Pausing	1 2 3 4 5 6 7
	(*vii*) Pupil's physical participation	1 2 3 4 5 6 7
	(*viii*) Aural visual switching	1 2 3 4 5 6 7

6. Observation Schedule for Skill of Explaining

Name of the student teacher .....
Class.....Concept.....
Duration.....Session.....
Teach/Reteach.....Date.....
Supervisor.....

Instructions

The rating scale for the skill of explaining comprises three columns. The first column indicates the serial number of the desirable and undesirable component behaviours of the skill of explaining. The second column specifies these component behaviours. The third one contains rating from one to seven against each of the components. The rating scale indicates the adequacy of the acquisition of the components of the skill. The seven points on the rating scale indicate the following. The rating may be indicated by encircling the number which represents the observer's assessment.

1. Extremely Weak
2. Very Weak
3. Weak
4. Average
5. Good
6. Very Good
7. Excellent

Sr. No.	*Components*	*Rating*
	Desirable Behaviour	
1.	Using appropriate beginning and concluding statements.	1 2 3 4 5 6 7
2.	Using explaining links.	1 2 3 4 5 6 7
3.	Covering essential points.	1 2 3 4 5 6 7
	Undesirable Behaviour	
4.	Using irrelevant statements.	1 2 3 4 5 6 7
5.	Lacking fluency.	1 2 3 4 5 6 7
6.	Lacking continuity in statements.	1 2 3 4 5 6 7
7.	Making use of inappropriate vocabulary, vague words and phrases.	1 2 3 4 5 6 7